QUICK START GUIDE

BERNINA EditorPlus

BERNINA DesignerPlus

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Note

The screen illustrations in this publication are intended to be representations, not exact duplicates of the screen layouts generated by the software.

Printed User Manual

Registered owners of BERNINA® Embroidery Software are permitted to create one (1) copy of the BERNINA® Embroidery Software User Manual for their personal use. This can be printed with a personal printer or through a commercial printing company.

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You may terminate this License at any time by returning the BERNINA® Embroidery Software and all copies thereof, the dongle security device, cable and all accompanying documentation to BERNINA International AG.

Contact

If you have any questions, please contact your BERNINA distributor, or

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Rev 1 May 2009

CHAPTER 1
INTRODUCTION

Welcome to BERNINA® Embroidery Software, the leading embroidery design application for home users. This is an MS Windows®-based product incorporating many of the conventions with which most PC users are already familiar.

BERNINA® Embroidery Software is unique in providing seamless integration with CorelDRAW® Essentials 4 by the Corel Corporation, the most popular vector-based drawing package for home users. This combination offers a more efficient, user-friendly approach to embroidery design by combining the embroidery capabilities of BERNINA Embroidery Software with graphical capabilities of CorelDRAW®. It also allows users to create not just embroidery, but true, multi-medium designs.

Note CorelDRAW® Essentials 4 and its sister product, Corel PHOTO-PAINT® Essentials 4 can also be run as standalone applications. For a full description of the CorelDRAW® Essentials 4 tools, refer to the electronic User Guide available via the Windows **Start > Programs** group. Alternatively, use the onscreen help available from the **Graphics** mode **Help** menu.

First-time users

If you are new to BERNINA® Embroidery Software, you'll be pleased with its flexible digitizing capabilities, the ease with which you can create and edit designs, and how simple it is to add or create your own lettering. However, before you begin working with the product, read the Introduction to Embroidery Digitizing in the Onscreen Manual. This chapter presents an overview of the basic concepts of digitizing with BERNINA Embroidery Software and provides you with important guidelines on how to use this software to achieve the best results.

You should also familiarize yourself with Basic Procedures. Here you will learn how to start the application, create or open a design, print designs, and how to use some of the essential tools and features that BERNINA Embroidery Software provides. The chapter Viewing Designs in the Onscreen Manual also provides an overview of the design viewing modes in BERNINA Embroidery Software.

Update users

BERNINA Embroidery Software is an enhanced version of our earlier products. It has many new

and expanded features. Read the chapter Introduction to Embroidery Digitizing in the Onscreen Manual to familiarize yourself quickly with the scope of these improvements.

BERNINA® Embroidery Software product levels

There are two BERNINA® Embroidery Software product levels:

- BERNINA EditorPlus
- BERNINA DesignerPlus.

Caution The product levels are controlled by the security device. This device is the most important and valuable part of your system and should be treated with care.

Note BERNINA Embroidery Software users can purchase software upgrades directly from the Internet.

BERNINA EditorPlus

With BERNINA EditorPlus, you can edit existing designs and add lettering. You can also create attractive designs with a minimum of fuss from scanned artwork. Use powerful automatic digitizing features such as Auto Digitizer, Magic Wand and PhotoSnap. In addition you can:

- Change color sequence for better stitchouts
- Edit individual stitches to fine-tune your designs to a perfect finish
- Use Auto Digitizer to create attractive embroidery automatically from scanned artwork
- For greater control, use Magic Wand to convert shapes in pictures to stitches
- Use PhotoSnap to turn photographs into line stitching.

BERNINA DesignerPlus

BERNINA DesignerPlus offers powerful features for digitizing, editing and lettering, combining both automatic and manual digitizing tools and methods for maximum control and quality. Specifically, with this system you can:

- Use scanned or imported artwork to digitize designs on-screen
- In addition to the automatic digitizing tools, use specialized digitizing tools, plus a wide range of artistic, decorative fill patterns
- Create appliqué with Auto Appliqué
- Convert any Windows TrueType font to an embroidery alphabet
- Save all your favorite settings to templates.

Note To identify features relevant to your specific model, see the BERNINA Embroidery Software Product Feature List in the Onscreen Manual.

BERNINA® Embroidery Software documentation

BERNINA Embroidery Software provides you with a number of ways to access information about your software and how to use it, both in printed form and onscreen via the **Help** menu.

Caution Screen illustrations in the user documentation are intended to be representations, not exact duplicates of the screen layouts generated by the software. Procedural descriptions may be at slight variance from particular installations depending on which default system settings are activated.

Printed documentation

Depending on your product level, together with your BERNINA Embroidery Software installation

DVD you will have received the following printed documentation:

Quick Start Guide

The BERNINA Embroidery Software Quick Start Guide contains installation instructions as well as an introduction to your BERNINA Embroidery Software. There is also a Quick Reference section which lists all the commands and shortcut keys used in the software. In addition, the guide provides a fully worked sample project. Additional tutorials are provided in the onscreen Quick Start Guide.

Tip For detailed procedures covering all features of the BERNINA Embroidery Software (all product levels) and BERNINA Portfolio applications, refer to the Onscreen Manual which can be accessed via the **Help** menu. To identify sources of information relevant to your specific model, see the BERNINA Embroidery Software Product Feature List in the Onscreen Manual.

Onscreen documentation

Onscreen documentation is provided in two formats – HTML Help and Adobe Acrobat. Depending on your product level, documentation components will include some or all of the following:

Release Notes

A set of Release Notes is included with the software installation. These provide detailed information about new and improved features as well as direct links to the relevant sections of the Onscreen Manual.

Quick Start Guide

The BERNINA Embroidery Software Quick Start Guide is also provided in onscreen form. This provides additional information about product upgrades and updates. Additional tutorials are also provided in the onscreen Quick Start Guide. While the tutorials do not cover all product features, they provide a useful introduction for all product levels.

Onscreen Manual

The Onscreen Manual provides detailed procedures covering all features of the BERNINA Embroidery Software and BERNINA Portfolio applications. It contains hundreds of step-by-step instructions together with samples and screen images. The BERNINA Cross Stitch and BERNINA Quilter applications are documented in separate supplementary manuals described below.

Onscreen Help

Onscreen Help provides quick access to general information on BERNINA Embroidery Software features and step-by-step instructions.

Supplementary user manuals

With your BERNINA Embroidery Software installation DVD you will have also received the following supplementary onscreen user manuals:

BERNINA Cross Stitch Onscreen Manual

This manual supplement documents the capabilities of the special BERNINA Cross Stitch application. Cross stitching is a popular technique for filling large areas with low stitch counts. It can also be used for outlines and borders. It is suitable for homeware, tablecloths, children's clothes and folk designs. Cross stitch is sometimes combined with appliqué.

BERNINA Quilter Onscreen Manual

This manual supplement documents the capabilities of the special BERNINA Quilter application. Patchwork is a popular technique for designing and sewing patches into blocks. BERNINA Quilter can be used to design

patchwork quilts, either from existing designs or patterns, or from designs of your own making. Use BERNINA Quilter to experiment with patches and colors enabling you create beautiful, personalized quilts.

Conventions used in the manual

The following conventions are adopted and used throughout the manual.

Commands

In this manual, commands on a menu or submenu are referred to by both the menu and command names. For example the 'Show All' command in the 'View' menu is referred to as **View > Show All**.

Dialog boxes

Dialog boxes are referred to as 'dialogs' and are shown in the manual only if they provide important information on using BERNINA® Embroidery Software. The screen images provided are intended to be representations, not exact duplicates of the layouts generated by the software.

Keyboard conventions

Instruction	Symbol	Action
Click		Click the left mouse button.
Right-click		Click the right mouse button.
Double-click		Click the mouse button twice without moving the mouse.
Click OK	or Enter	Click OK with the mouse or press the Enter key on the keyboard to complete the action.

Shortcut	Description
Ctrl + S	While holding down the Control key (Ctrl), press the lowercase letter S key.
Ctrl + Shift + H	While holding down the Control key (Ctrl), press Shift and the H key.
For a complete list of keyboard shortcuts, refer to the Quick Reference Guide.	

Viewing information onscreen

Select Help Topics (Help menu) to view onscreen help.

Select Onscreen Manual (Help menu) to view the onscreen manual.

Select Bernina International Home Page (Help menu) to view the Bernina International Web Page.

Select Bernina of America Home Page (Help menu) to view the Bernina of America Web Page.

Select Embroidery Online (Help menu) to view the Embroidery Online Web Page.

Onscreen user documentation is provided in the form of an Onscreen Manual and Onscreen Help.

Viewing Onscreen Help

Onscreen Help provides quick access to general information on BERNINA Embroidery Software features and step-by-step instructions.

To view Onscreen Help

1. Select **Help > Help Topics** to open the main Help window.
2. Click **Contents** to display the main list of topics.

   Topics are grouped under high-level headings with 'book' icons.

3 Double-click a book to view the list of topics, then double-click a topic.

Tip Alternatively, click **Find** and enter keywords to search on a specific subject.

Viewing the Onscreen Manual

You can read the Onscreen Manual using Adobe Acrobat™ Reader. This application is not supplied with your BERNINA Embroidery Software but it is freely available from the Adobe web site. Using the Onscreen Manual you can quickly search for the information you need, using standard Adobe Acrobat™ Reader features.

To view the Onscreen Manual

- Select **Help > Onscreen Manual**.

Note If BERNINA Embroidery Software is not running, you can open the Onscreen Manual directly from Windows Explorer. To do this, navigate to the ..\Program Files\BERNINA\Embroidery Software 6\bin folder, and double-click UserManual.pdf.

Linking to the BERNINA® websites

You can access sales and support information about the products easily from within the software.

Note You must have a correctly configured web browser on your system together with web access.

To link to the BERNINA® website

- Connect to your Internet Service Provider (ISP).
- Select **Help > BERNINA Web Page**.

You are directly connected to the BERNINA® homepage at:

- Bernina International - http://www.bernina.com/
- Bernina of America - http://www.berninausa.com/
- Embroidery Online - http://www.embroideryonline.com

CHAPTER 2
INSTALLATION AND SETUP

The BERNINA Embroidery Software V6.0 kits include some or all of the following components:

- BERNINA® Embroidery Software Installation DVD
- USB dongle with tag attached
- BERNINA® Embroidery Software Quick Start Guide

Note The BERNINA Embroidery Software installation DVD includes software for **all** products, including BERNINA DesignerPlus, BERNINA EditorPlus, BERNINA Portfolio, BERNINA Cross Stitch and BERNINA Quilter.

System requirements

You need to ensure that the following pre-requisite system requirements are met in order to run the BERNINA Embroidery Software.

PC specifications

Check that your PC meets the system requirements. Check CPU/RAM as well as hard disk space. The table below provides minimum system requirements.

Item	Minimum Requirements
CPU	Single Core 1GHz or greater processor
Operating System	Windows XP® SP2 (Home or Professional)
Internet Connection	Optional: Internet connection for access to regular product information
Internet Browser	Internet Explorer 6.x
System Memory	1GB for running multiple applications
Hard Disk Size	30GB available before installation
Free Disk Space	2GB or more than 10% of the Hard Drive Size, whichever is greater
Data Drives	DVD-ROM drive for software installation
Graphics Card	Support for High Color (16 bit) and high resolution (1024 x 768)
Monitor	15” or larger for on-screen digitizing
USB Ports	Dedicated USB port for security device. Additional USB ports for Bernina Reader/Writer Box or direct machine connection.
Serial Ports	Additional serial port for artista Reader/Writer Serial Box connection (optional)
Scanner	MS Windows® XP compatible
Printer	MS Windows® XP compatible
Mouse	MS Windows® XP compatible
Sound cards	Not required

Security device

USB Port Dongle

BERNINA Embroidery Software is controlled by a security device or 'dongle' attached to the computer, in conjunction with security access codes entered into the software. Each dongle has a serial number and identity code so your system can be uniquely recognized.

Caution Do not attach your dongle until prompted by the software installation. Otherwise the generic USB drivers will be used and will prevent the correct working of the security system.

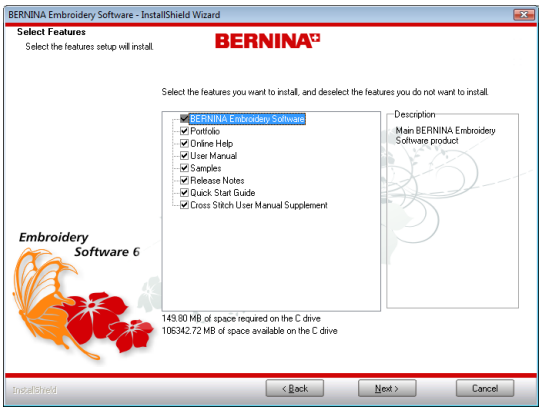
All purchases of the latest software release, whether new or updates, are shipped with a USB type dongle – parallel port dongles are no longer provided. Whenever you update your software, you will be prompted to carry out a 'brain transplant' from your previous dongle to the latest one.

Caution If the dongle is removed or loses connection while you are working in BERNINA Embroidery Software, error messages will display. Cancel the messages, then exit. You will lose any unsaved changes to your design. Re-attach the dongle to your computer, making sure that it is firmly secured, then restart BERNINA Embroidery Software.

Installation options

The Installation procedure lets you choose:

- where the software and sample designs will be installed on your PC or network
- which components will be installed – e.g. additional languages, BERNINA Portfolio
- which documentation files will be installed.


BERNINA Embroidery Software - InstallShield Wizard
Select Features
Select the features setup will install.
BERNINA
Select the features you want to install, and deselect the features you do not want to install.
BERNINA Embroidery Software
Portfolio
Online Help
User Manual
Samples
Release Notes
Quick Start Guide
Cross Stitch User Manual Supplement
Description
Main BERNINA Embroidery Software product
Embroidery Software 6
149.80 MB of space required on the C drive
106342.72 MB of space available on the C drive
InstallShield
< Back
Next >
Cancel

Note The BERNINA Embroidery Software checkbox is always selected. The Extra Languages checkbox may not be present, depending on the software release you have purchased.

Merging software versions

You may choose to merge with an already installed version of software. Existing 'assets' are handled as follows:

Patterns

BERNINA Embroidery Software allows you to add patterns to any of the pre-defined pattern sets and may also create new ones. There may also be changes to the latest factory versions of these files. The installation examines all existing patterns on your PC and merges them with the new software installation.

Templates

BERNINA Embroidery Software also allows you to modify installed templates as well as create new ones. There may also be changes to the latest factory versions of these files. The installation examines all templates in the

system and merges them with the new software installation.

Thread charts

If you have adjusted any settings in the thread charts, these are preserved.

Appliqué fabrics

Sample appliqué fabrics are now used both by BERNINA Embroidery Software and BERNINA Quilter applications. You may have added or modified fabrics in an existing BERNINA Quilter installation. When installing fabrics, the BERNINA Embroidery Software installation checks the existing fabrics file and merges it with the new installation.

Note Any changes that you may have made to your current BERNINA Quilter fabric library will be merged with the latest installation.

Dos and Donts

- Never remove an existing BERNINA Embroidery Software installation manually by selecting program file folders and pressing the **Delete** key. This is true for all Windows applications.
- Avoid removing an existing BERNINA Embroidery Software installation by choosing **Programs > BERNINA Embroidery Software > Uninstall** from the Windows **Start** menu, or by using **Add/Remove Programs** from the Windows **Control Panel**. Both of these methods will remove all of the files known to BERNINA Embroidery Software and you will lose all your user-defined settings.
- Instead, let the BERNINA Embroidery Software installation procedure uninstall the previous version as you update your software. This way, the installation program will merge all of the user-defined settings with the new settings.
- When you install the software, your computer will be rebooted automatically to ensure successful installation of the software. Make sure that you save any files and close all applications beforehand. The installation will prompt you before restarting.
- If you have removed BERNINA Embroidery Software using **Programs > ... > Uninstall** or **Add/Remove Programs**, the uninstall process may leave some files in the installation folder. You need to manually delete this folder and its contents using **Windows Explorer**.

Installing BERNINA Embroidery Software

The installation procedure lets you choose:

- where the software and sample designs will be installed on your PC or network
- which components will be installed – e.g. additional languages, BERNINA Portfolio
- which documentation files will be installed.

Caution If you are updating your software, do not uninstall the current version. Let the installation procedure do this for you. See also Merging software versions.

To install BERNINA Embroidery Software

1. Ensure your computer meets the technical requirements for BERNINA Embroidery Software. See System requirements for details.
2. Close all Windows applications but leave Windows running.

Caution Do not attach your dongle until prompted by the software installation.

Otherwise the generic USB drivers will be used and will prevent the correct working of the security system.

3 Insert the BERNINA Embroidery Software Installation DVD-ROM.

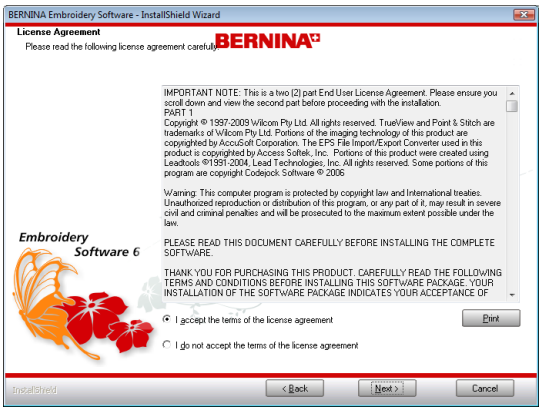
The installation program should start within 30 seconds and a **Welcome** screen displayed.

4 Click **Next**.

5 Choose which products to install and click **Next**.

6 Click **Next**.

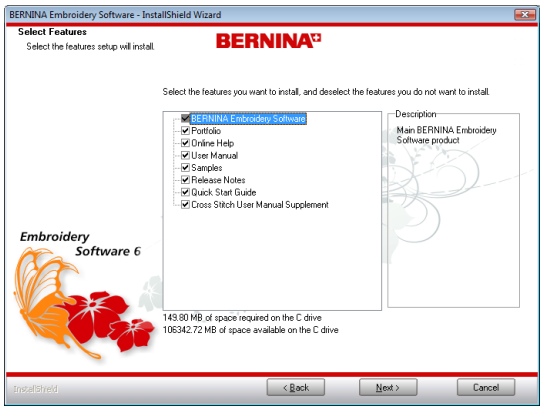
The **License Agreement** screen is displayed. The **Next** button is grayed out unless the radio button 'I accept the terms of the license agreement' is selected.


BERNINA Embroidery Software - InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
BERNINA
IMPORTANT NOTE: This is a two (2) part End User License Agreement. Please ensure you scroll down and view the second part before proceeding with the installation.
PART 1
Copyright © 1997-2009 Wilcom Pty Ltd. All rights reserved. TrueView and Point & Stitch are trademarks of Wilcom Pty Ltd. Portions of the imaging technology of this product are copyrighted by AccuSoft Corporation. The EPS File Import/Export Converter used in this product is copyrighted by Access Softek, Inc. Portions of this product were created using Leadtools ©1991-2004, Lead Technologies, Inc. All rights reserved. Some portions of this program are copyright Codejock Software © 2006
Warning: This computer program is protected by copyright law and International treaties. Unauthorized reproduction or distribution of this program, or any part of it, may result in severe civil and criminal penalties and will be prosecuted to the maximum extent possible under the law.
PLEASE READ THIS DOCUMENT CAREFULLY BEFORE INSTALLING THE COMPLETE SOFTWARE.
THANK YOU FOR PURCHASING THIS PRODUCT. CAREFULLY READ THE FOLLOWING TERMS AND CONDITIONS BEFORE INSTALLING THIS SOFTWARE PACKAGE. YOUR INSTALLATION OF THE SOFTWARE PACKAGE INDICATES YOUR ACCEPTANCE OF
Embroidery Software 6
I accept the terms of the license agreement
I do not accept the terms of the license agreement
Print
InstallShield
< Back
Next >
Cancel

Tip You can print the License Agreement by means of the **Print** button.

7 Select to accept and click **Next**.

The **Select Components** screen is displayed. The BERNINA Embroidery Software checkbox is always selected. If you are installing a multi-language version of the software, choose the **Install extra languages** checkbox as required.


BERNINA Embroidery Software - InstallShield Wizard
Select Features
Select the features setup will install.
BERNINA
Select the features you want to install, and deselect the features you do not want to install.
BERNINA Embroidery Software
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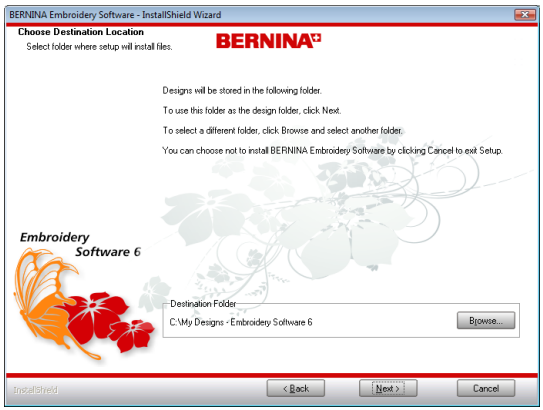
Description
Main BERNINA Embroidery Software product
Embroidery Software 6
143.80 MB of space required on the C drive
106342.72 MB of space available on the C drive
InstallShield
< Back
Next >
Cancel

8 Choose which components to install and click **Next**.

The **Choose Installation Folder** screen is displayed.

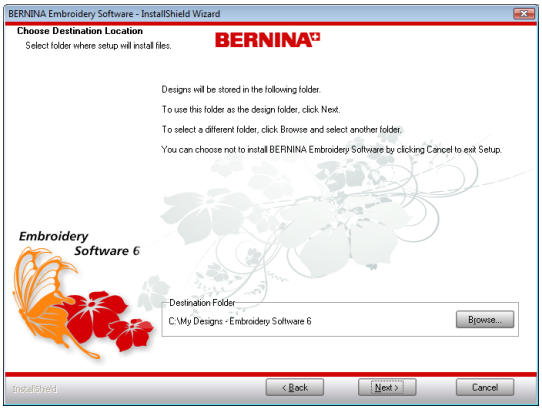

BERNINA Embroidery Software - InstallShield Wizard
Choose Destination Location
Select folder where setup will install files.
BERNINA
Designs will be stored in the following folder.
To use this folder as the design folder, click Next.
To select a different folder, click Browse and select another folder.
You can choose not to install BERNINA Embroidery Software by clicking Cancel to exit Setup.
Embroidery Software 6
Destination Folder
C:\My Designs - Embroidery Software 6
Browse...
InstallShield
< Back
Next >
Cancel

- To accept the default folder, click **Next**.
- To change the location, click **Browse**, specify an existing folder or create a new one and click **Next**.

Caution If there is an existing installation in the chosen folder, the system displays this warning.

Warning
An installation has been detected in this folder.
If you choose to continue, the existing installation will be overwritten.
If you want to keep the existing installation, click No to choose another software directory.
Continue?
Yes
No

9 When the **Choose Destination Location** screen is displayed, choose the design folder where you want your designs to be saved.


BERNINA Embroidery Software - InstallShield Wizard
Choose Destination Location
Select folder where setup will install files.
BERNINA
Designs will be stored in the following folder.
To use this folder as the design folder, click Next.
To select a different folder, click Browse and select another folder.
You can choose not to install BERNINA Embroidery Software by clicking Cancel to exit Setup.
Embroidery Software 6
Destination Folder
C:\My Designs - Embroidery Software 6
Browse...
InstallShield
< Back
Next >
Cancel

The default location is My Designs - Embroidery Software 6. Sample designs included with the software are stored in this folder.

- To accept the default folder, click **Next**.
- To change the location, click **Browse** – specify an existing folder or create a new one and click **Next**.

If you choose to install the software into the **same** folder as an earlier version, the new version is installed over the old and simultaneously merged.

Note Your own designs are neither removed nor overwritten during installation, but old sample designs may be overwritten by new sample designs of the **same** name.

10 Click **Next**.

If your PC already contains one or more older versions of BERNINA Embroidery Software:

- You will be prompted to uninstall the earlier version(s). If you choose to, the earlier software is uninstalled.
- The older version will be merged with the new when the PC reboots.

11 Click **Next**.

The **Ready to Install** screen opens.

12 Click **Install** to proceed.

You are prompted to attach your dongle.

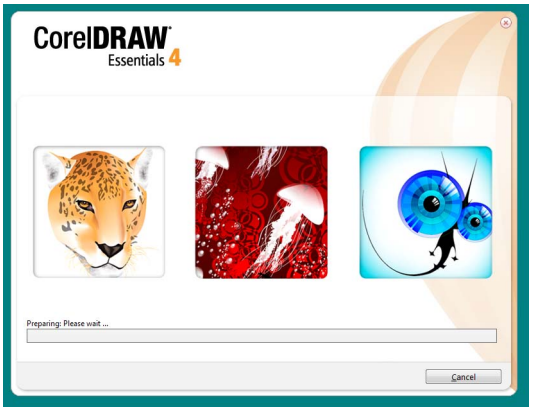
If you have an update kit, you will be prompted to attach your old dongle as well.

Dongle Update
Your dongle must be updated, but your CURRENT BERNINA artista dongle is not detected. Please attach the dongle to your PC, then click OK.
At this statge, your current (blue) V4 dongle AND your new (red) V6 dongle should both be attached.
OR
your current blue V5 dongle AND your new red V6 dongle should both be attached.
Embroidery Software 6

13 Click **Next**.

The **Setup Status** screen keeps you informed of the progress of the installation.

CorelDRAW® Essentials 4 is installed as part of the normal BERNINA Embroidery Software installation.



After the installation has run, an **Installation Complete** dialog appears.

14 Click **Finish** to complete the installation.

You are given the option to restart with the new installation. The recommended action is to restart immediately. Shortcut icons are placed on the Windows Desktop and in the Start Menu Program Group.

If you are updating from an earlier version, the merging process may take some time – up to 15 minutes – and a DOS screen may appear.

Any changes that you may have made to your old BERNINA Quilter fabric library will now be merged with the latest installation. The installation also merges any user-defined patterns or motifs. See Merging software versions for details.

Modifying an existing installation

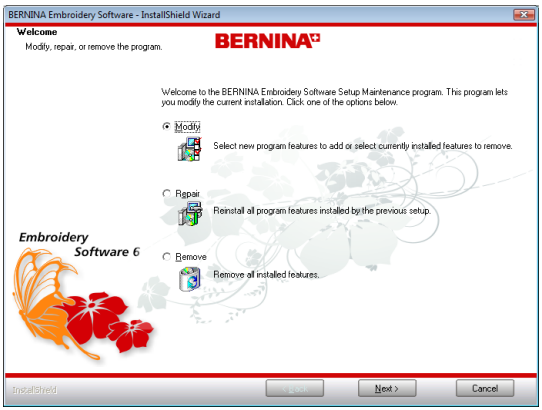
Whether you are updating your **current** BERNINA® Embroidery Software software or wanting to uninstall it, you follow the same procedure. When you run the installation program again, it will automatically detect if there is an existing copy of BERNINA® Embroidery Software on your system and give you to option to modify, repair or remove it. This will prevent the installation of more than one release version of BERNINA® Embroidery Software on your computer.

To modify an existing installation

1 Close all Windows applications but leave Windows running.

2 Insert the BERNINA® Embroidery Software Installation DVD-ROM.

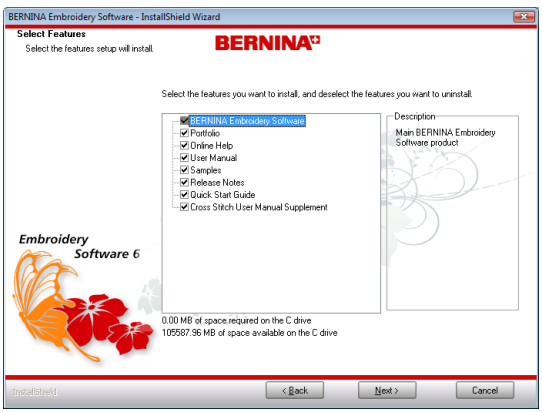
If BERNINA® Embroidery Software software is already installed on the computer, the following Welcome screen will appear.


BERNINA Embroidery Software - InstallShield Wizard
Welcome
Modify, repair, or remove the program.
BERNINA
Welcome to the BERNINA Embroidery Software Setup Maintenance program. This program lets you modify the current installation. Click one of the options below.
Modify
Select new program features to add or select currently installed features to remove.
Repair
Reinstall all program features installed by the previous setup.
Remove
Remove all installed features.
Embroidery Software 6
InstallShield
< Back
Next >
Cancel

3 Choose the option you require—**Modify**, **Repair**, **Remove**—and click **Next**.

- **Modify**: changes selection of installed components
- **Repair**: reinstalls the same components as already installed
- **Remove**: uninstalls the software.

If you choose to modify your current installation, the **Select Components** screen appears.



4 Select the features and languages to add or deselect to remove.

5 Click **Next**.

The **Ready to Install** screen appears.

6 Click **Install**.

Upon successful installation of the software and any additional Windows files that need updating, the **Maintenance Complete** screen appears.

Note If you have selected **Repair** as your installation option, currently installed components will be reinstalled.

7 Click **Finish**.

Upgrades and access codes

BERNINA Embroidery Software is controlled by a security device or 'dongle' attached to the computer, in conjunction with 'access codes' entered into the software. The **Dongle Number** is the most important number. It consists of a unique 7-character number appearing on the tag attached to your dongle. As well as the dongle number, each dongle has a unique **Serial Number** and **Identity Code** stored inside it so your system can be uniquely recognized. The identity code can be obtained via the BERNINA® Embroidery Software application. You may upgrade your software directly via the internet.

Identifying your security device

When referring to your system in correspondence or by telephone, you need to quote your **Dongle Number**. You may also need to quote the **Serial Number** and **Identity Code**. This information is found on the dongle itself, as well as both the **Access Code Order**

Form and the **Security Device** dialog. See also Ordering access codes from your dealer.

To identify your security device

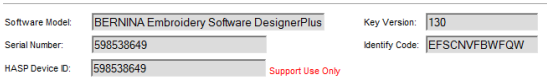
- Inspect the tag attached to your dongle. for the **dongle number** – this consists of a unique 7-character number starting with the letter 'A'.

Front: Shows product level or updated product level

Back: Dongle Number - quote this to your dealer

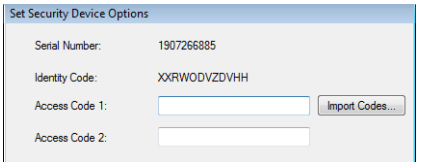
- Check the **Serial Number** and **Identity Code** by either of the following means:
  - Select **Help > Access Codes Order Form.**

    The **Access Code Order Form** opens. The **Serial Number** and **Identity Code** of your security device display at the top of the form.



  - Select **Settings > Security** to open the **Security Device** dialog.

    The **Set Security Device Options** dialog opens. The **Serial Number** and **Identity Code** of your security device display at the top of the dialog.



Note The **Serial Number** field displays the dongle's internal serial number (before the hyphen). This is a unique number that is read from the dongle attached to your computer. It is different to the number on the dongle tag or dongle itself. We recommend recording this number for support purposes.

Upgrading BERNINA® Embroidery Software online

US and Canadian BERNINA Embroidery Software users can now purchase software upgrades directly via the internet. Online upgrades are accessed via the **Purchase Upgrades on the Internet** command in the **Help** menu. If the command is enabled and selected, the system launches Internet Explorer and accesses an OESD website dedicated to this function. The website offers you a choice of upgrade relevant to the current level of your dongle. If your dongle is at BERNINA EditorPlus level, the website will offer an upgrade to BERNINA DesignerPlus.

To upgrade BERNINA® Embroidery Software online

1. Make sure your internet connection is activated.
2. Select **Help > Purchase Upgrades on the Internet**.

   You are connected to the OESD website.

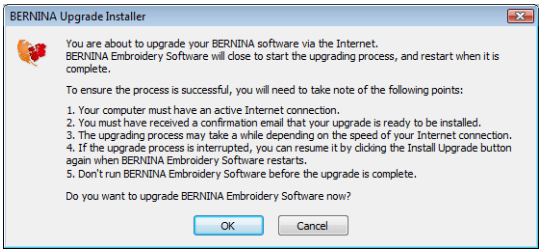
3 Follow the instructions on the website to choose your upgrade requirement.

The website will offer you a payment method. If you pay for the chosen upgrade:

- The website sends you an email confirming the sale and asking you to wait for a second email before clicking the **Install Upgrade** button.
- The website then sends you a second email informing you that the access codes are ready.

4 After notification by email, select **Help > Install Upgrade**.

The **Bernina Upgrader** dialog opens.


BERNINA Upgrade Installer
You are about to upgrade your BERNINA software via the Internet.
BERNINA Embroidery Software will close to start the upgrading process, and restart when it is complete.
To ensure the process is successful, you will need to take note of the following points:
1. Your computer must have an active Internet connection.
2. You must have received a confirmation email that your upgrade is ready to be installed.
3. The upgrading process may take a while depending on the speed of your Internet connection.
4. If the upgrade process is interrupted, you can resume it by clicking the Install Upgrade button again when BERNINA Embroidery Software restarts.
5. Don't run BERNINA Embroidery Software before the upgrade is complete.
Do you want to upgrade BERNINA Embroidery Software now?
OK
Cancel

5 Click **OK**.

The access codes are downloaded to your dongle and the software upgraded.

6 When the upgrade process is complete, click **OK**.

BERNINA® Embroidery Software is restarted at its new level.

Note If you have any problems, contact your dealer.

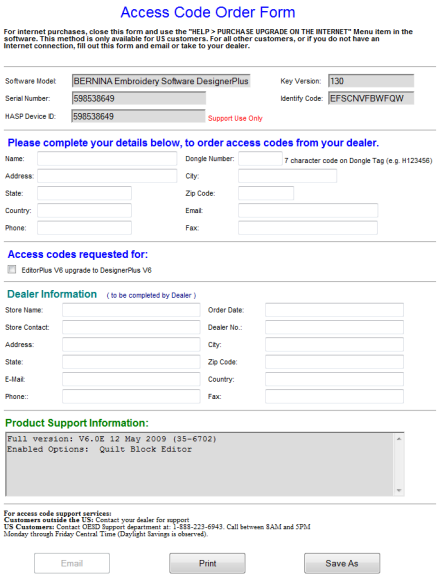
Ordering access codes from your dealer

If you are unable to upgrade via the internet for any reason, you can order access codes from your dealer. The easiest way to do so is via the **Access Code Order Form**. This can be completed, printed out and sent to your dealer, or simply emailed directly. You need to obtain an email address from your dealer before placing orders by this means.

To order access codes from your dealer

1 Select **Help > Access Codes Order Form.**

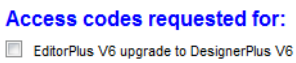
The **Access Code Order Form** opens.


Access Code Order Form
For internet purchases, close this form and use the "HELP > PURCHASE UPGRADE ON THE INTERNET" Menu item in the software. This method is only available for US customers. For all other customers, or if you do not have an Internet connection, fill out this form and email or take to your dealer.
Software Model:
BERNINA Embroidery Software DesignerPlus
Key Version:
130
Serial Number:
598538649
Identify Code:
EFSCNVFBWFQW
HASP Device ID:
598538649
Support Use Only
Please complete your details below, to order access codes from your dealer.
Name:
Dongle Number:
7 character code on Dongle Tag (e.g. H123456)
Address:
City:
State:
Zip Code:
Country:
Email:
Phone:
Fax:
Access codes requested for:
EditorPlus V6 upgrade to DesignerPlus V6
Dealer Information
(to be completed by Dealer)
Store Name:
Order Date:
Store Contact:
Dealer No.:
Address:
City:
State:
Zip Code:
E-Mail:
Country:
Phone:
Fax:
Product Support Information:
Full version: V6.0E 12 May 2009 (35-6702)
Enabled Options: Quilt Block Editor
For access code support services:
Customers outside the US: Contact your dealer for support
US Customers: Contact OESD Support department at: 1-888-223-6943. Call between 8AM and 5PM Monday through Friday Central Time (Daylight Savings is observed).
Email
Print
Save As

2 Enter your details.

Note Make sure you enter all 7 characters of your dongle number. If there are only 6 characters, add a 0 to the beginning.

3 Select the type of access code required.



4 Do not enter dealer information – this section will be completed by the dealer themselves.

5 Choose whether to **Print** the order from or **Email** direct.

- If the former, you will need to send the order form by normal post. The dealer will send back a letter containing the printed access codes. These will need to be input manually. See Entering access codes for details.
- If the latter, the **Email** dialog opens.

6 Enter the dealer email address.

You need to obtain this from your dealer before you send the email.

7 Enter a message for the dealer and click the **Send** button.

Your access codes will be sent to you as an email attachment. Save the file to a safe location on your hard drive – e.g. your PC desktop. Now you can import the access codes. See Importing access codes for details.

Tip When you open the **Access Code Order Form**, BERNINA® Embroidery Software creates a special access codes folder at **..\Program Files\BERNINA\Embroidery Software 6\ACCESSCODES**. For safekeeping, you can store your access codes file in this location.

Entering access codes

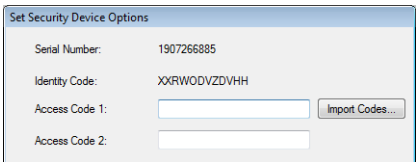
If for any reason you are unable to upgrade your software online, you can enter security access codes manually to upgrade to new options or software releases. Your dealer will supply these codes. See also Ordering access codes from your dealer.

Tip You can also enter access codes by importing them from a text file. This saves time and helps avoid typing errors. See Importing access codes for details.

To enter access codes

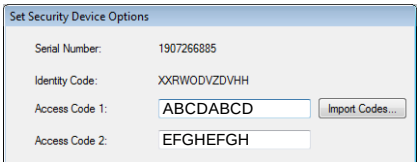
1 Select **Settings > Security**.

The **Set Security Device Options** dialog opens.



2 Check that the **Serial Number** and **Identity Code** match those on the email containing the new access codes text file. The two codes **must** be identical.

3 Enter the access codes in the fields using **Tab** or **Enter** to move between them.



Tip When keying in your access codes, BERNINA® Embroidery Software adds a space between each four-character set automatically. You don't have to key spaces manually.

4 Click **OK**.

A message displays indicating that the access codes were successfully entered.

5 Restart BERNINA® Embroidery Software.

Importing access codes

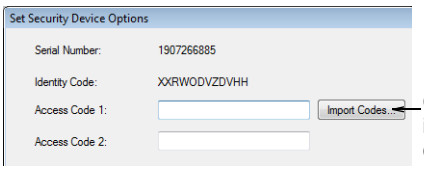
Rather than entering access codes manually, you have the option of importing them from a text file. This saves time and helps avoid typing errors. Your dealer will supply the text file by email. See also Ordering access codes from your dealer.

To import access codes

1 When you receive your access codes (as an email attachment), save the file to a safe location on your hard drive – e.g. your PC desktop. See also Ordering access codes from your dealer.

2 In BERNINA® Embroidery Software, select **Settings > Security**.

The **Set Security Device** dialog opens.

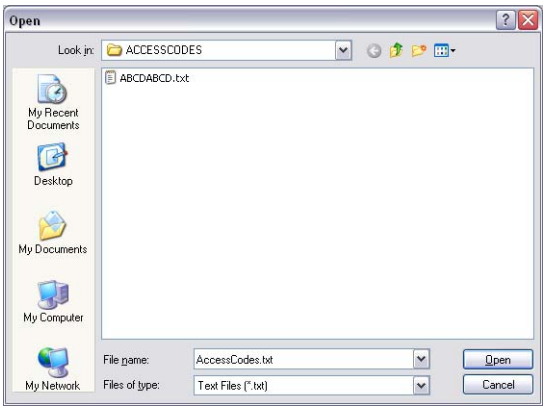


3 Check that the **Serial Number** and **Identity Code** match those on the email containing the new access codes text file. The two codes **must** be identical.

4 Click **Import Codes**.

The **Open** dialog opens.

5 Navigate to the location where you saved the access codes text file – e.g. your PC desktop.



6 Select the text file containing the new access codes and click **Open**.

The codes are automatically updated.

7 Restart BERNINA® Embroidery Software.

PART I
THE BASICS

Designs created in BERNINA Embroidery Software are composed of 'embroidery objects'. They are called 'objects' because they are discrete entities which can be manipulated independently of each other. Each object has certain defining characteristics or 'properties' such as color, size, position, and so on. The most important property of an embroidery object is its stitch type.

Introduction to embroidery digitizing

BERNINA Embroidery Software provides embroiderers with a fast, flexible way of creating and editing embroidery designs. This section provides an overview of the embroidery digitizing process as it applies to BERNINA® Embroidery Software. See Introduction to Embroidery Digitizing in the Onscreen Manual for details.

Basic procedures

This section describes how to start BERNINA Embroidery Software and access the available commands and tools. It covers basic procedures to do with opening, creating and saving design files. It explains how to activate hoops and grids and it covers accessing object properties. See Basic Procedures for details.

Viewing designs

This section explains the design viewing modes available in BERNINA Embroidery Software as well as the various design viewing settings. It describes zooming and panning as well as how to view the stitching sequence. It covers displaying design backdrops and changing backgrounds. It also explains how to obtain information about your designs. See Viewing Designs for details.

Selecting objects

This section describes how to select objects using the selection tools and keyboard. It also shows how to select color blocks or individual objects using the Color Film. See Selecting Objects for details.

Hooping designs

This section describes how to choose and display hoops in BERNINA Embroidery Software. It covers creating and modifying custom hoops. It also deals with hooping large designs. See Hooping Designs in the Onscreen Manual for details.

Hardware and software setup

This section describes how to set up embroidery machines, and scanners and describes how to calibrate the monitor. It also deals with changing grid spacing and hoop options. The setting of general options – such as automatic save, pointer position display options, etc – is also covered. See Hardware and Software Setup in the Onscreen Manual for details.

CHAPTER 3
BASIC PROCEDURES

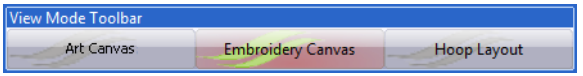
To start using BERNINA Embroidery Software, you need to know the basic procedures, such as starting up, opening and creating designs, and saving. Once you start BERNINA Embroidery Software, you use commands or icons, and dialogs to complete your tasks. You select commands in the same way as other MS Windows® applications – from menus or toolbars.

BERNINA Embroidery Software opens a range of native ART files, as well as some other embroidery file formats, from computer hard disk, floppy disk or CD-ROM. BERNINA Embroidery Software gives you a wide range of standard factory-supplied hoops to select from. Grid lines help you accurately align or size embroidery objects. The most important dialog in BERNINA Embroidery Software is the Object Properties dialog. This and the Effects dialog are 'modeless', meaning that they stay on the Design Window as long as you need them.

Note This section describes how to start BERNINA Embroidery Software and access the available commands and tools. It covers basic procedures to do with opening, creating and saving design files. It explains how to activate hoops and grids and it covers accessing object properties.

BERNINA Embroidery Software interface

BERNINA Embroidery Software integrates with CorelDRAW® Essentials 4 into a single application, allowing users to create, not just embroidery, but true, multi-medium designs. The application has one workspace or 'Design Window' but you interact with it in separate operating modes: **Art Canvas** and **Embroidery Canvas**. A third mode, **Hoop Layout**, is available for multi-hooping large designs. See also Viewing modes in the Onscreen Manual.



Starting BERNINA Embroidery Software

Double-click to start BERNINA® Embroidery Software.

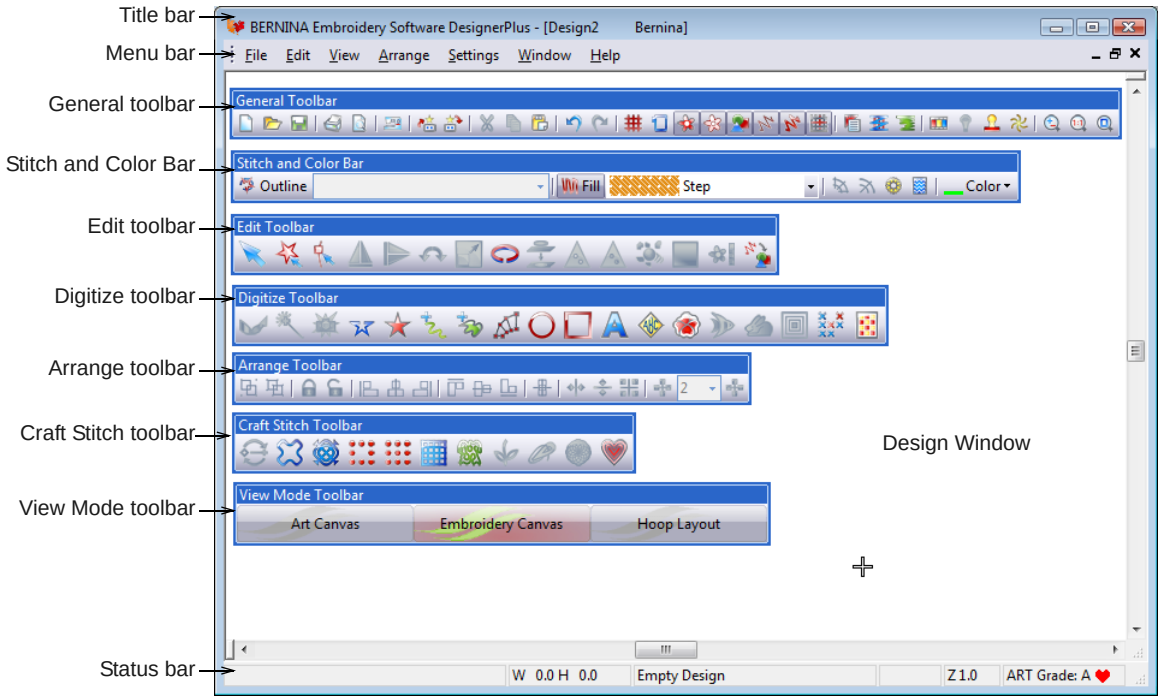
BERNINA Embroidery Software can be opened via the desktop icon or MS Windows® Start menu. It defaults to **Embroidery Canvas** mode. This mode allows you to create and edit embroidery objects using the embroidery digitizing toolset.

To start BERNINA Embroidery Software

- Double-click the BERNINA Embroidery Software shortcut icon on the MS Windows® desktop or select it via the Windows **Start > Programs** group.

  BERNINA Embroidery Software opens in **Embroidery Canvas** mode with a new, blank design (Design1). The screen image below displays an exploded view of **all** toolbars in the BERNINA DesignerPlus product. Depending on your product level,

you will have access to some or all of these options.

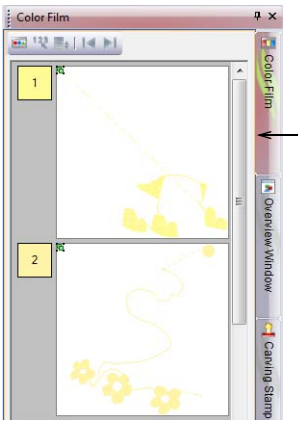


Note Toolbars are dockable left, right, top and bottom, and can be 'floated' anywhere in the Design Window. While the **Stitch and Color Bar** can be docked vertically, the **Outline** and **Fill** dropdown lists are not displayed. Therefore, it is advisable to dock the bar only horizontally. See also BERNINA Embroidery Software Quick Reference.

- Customize the Design Window by showing or hiding the grid, changing the grid dimensions, as well as showing and hiding toolbars. See Displaying the grid for details.

Docking panes

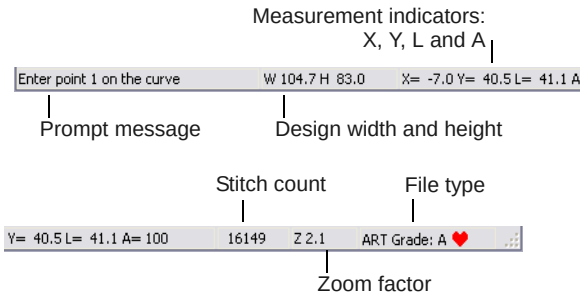
BERNINA Embroidery Software includes 'dockers' for key functions. **Embroidery Canvas** has docking panes for **Color Film**, **Carving Stamps**, **Morphing Effects**, and an **Overview Window**. All panes are dockable at the right side of the Design Window.



Dockers can be 'nested' to increase available workspace. When nested, tab buttons for each dialog appear to the side. All dockers can be fixed or minimized. By hovering the mouse over the tab, a minimized docker will 'fly out', allowing you to access its functions. It automatically minimizes when not in use. Dockers may also be 'floated' by dragging the caption bar to the Design Window or double-clicking it when 'pinned' in place.

Status bar

A **Status Bar** at the bottom of the **Embroidery Canvas** Design Window provides continuous display of current cursor position status as well as instructions for use of selected tools.



Information displayed includes:

- Prompt message: guides you through use of selected functions
- Design width and height
- Coordinates of current needle position (X/Y), and length (L) and angle (A) of current stitch. See also Measuring distances onscreen.
- Stitch count: total number of stitches in design
- Zoom factor
- File type: indicates grade of ART design – BERNINA Embroidery Software native ART designs are classified in four grades depending on how the file was created. See Embroidery design formats in the Onscreen Manual for details.

Working with design files

By default BERNINA Embroidery Software saves designs to its native 'ART' file format. This format contains all information necessary both for stitching a design and for later modification. BERNINA Embroidery Software opens a range of native ART files, as well as some other embroidery file formats, from computer hard disk, floppy disk or CD-ROM. You can save designs in ART as well as other file formats. See Reading and Writing Design Files in the Onscreen Manual for details.

Caution You cannot open ART files created with a later version of the software to the one you are running. If you attempt to, you will be prompted to update your system to the current version.

Opening designs

Use Open (General toolbar) to open an existing design.

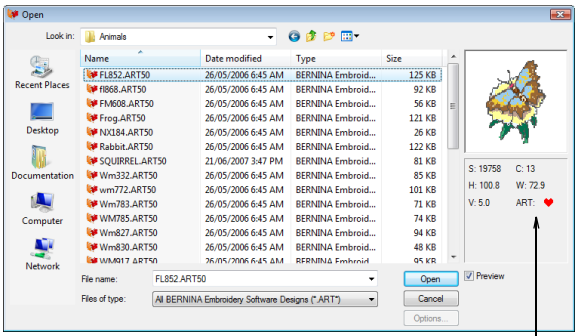
BERNINA Embroidery Software opens a range of embroidery files in addition to its own ART format. Native ART designs are classified in four grades depending on how the file was created. See also Starting BERNINA Embroidery Software.

Note By default, designs are automatically grouped upon opening or insertion into another design. See Setting other general options in the Onscreen Manual for details.

To open a design

1 Click the **Open** icon.

The **Open** dialog opens.



2 Select a folder from the **Look In** list.

Note You can read designs stored on floppy disk or CD as well as computer hard disk.

3 If the design is not in ART format, select a file type from the **Files of Type** list.

4 Select a design or designs.

- To select a range, hold down **Shift** as you click.
- To select multiple items, hold down **Ctrl** as you click.

5 Select the **Preview** checkbox to preview the design (for supported file formats) together with design data. This includes stitch and color numbers, design height and width, and software version number.

6 Click **Open**.

Note You can also read designs from your embroidery machine memory or BERNINA design card. If you have a Magic Box, you can read from other design cards as well. See Reading and Writing Design Files in the Onscreen Manual for details.

Starting new designs

Use New (General toolbar) to start a new design with the NORMAL template.

When you start BERNINA Embroidery Software, a new file – **Design1** – is automatically created, ready for you to start digitizing. By default, **Design1** is based on the NORMAL template. Templates contain pre-set styles, defaults or objects, to make digitizing quicker and easier. When you create a file based on a template, the template's values are copied to the new design. You can also select a custom template to base your new design on. See also Object Properties and Templates in the Onscreen Manual.

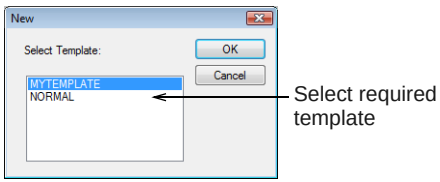
To start a new design

- Click the **New** icon.

  A blank design opens in the Design Window based on the NORMAL template.

- To use a custom template, select **File > New**.

  If there are templates additional to the default, the **New** dialog will appear.



- Select a template from the list and click **OK**. See also Object Properties and Templates in the Onscreen Manual.

Saving designs

Use Save (General toolbar) to save the current design.

BERNINA Embroidery Software designs can be saved in pure ART format as well as a number of

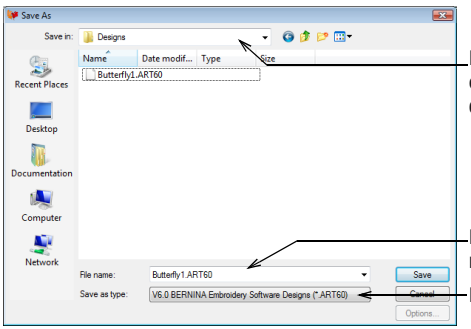
non-native formats. Saving a design records its file name, location and format, and updates it with any changes you make. When you save an existing design under a new name, to a different location or format, you create a copy of the original design. See also Reading and Writing Design Files in the Onscreen Manual.

Tip Save your designs early and often. Do not wait until you finish working. To save changes to an existing file but preserve the original, use **Save As**. Once you have saved a design, every time you click **Save** on the toolbar the file will be updated.

To save a design

1 Click the **Save** icon.

If this is the first time you have saved the design, the **Save As** dialog opens.



2 Select the folder where you want to save the design from the **Save In** list.

3 Enter a name for the design in the **File name** field.

4 Select a file format from the **Save as type** list. See also Supported embroidery file formats in the Onscreen Manual.

5 Click **Save**.

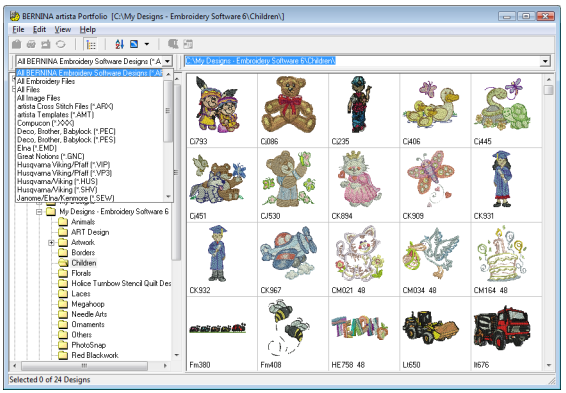
Note You can also write designs to your embroidery machine memory or BERNINA design card. If you have a Magic Box, you can write to other design cards as well. See Reading and Writing Design Files in the Onscreen Manual for details.

Sample designs and artwork

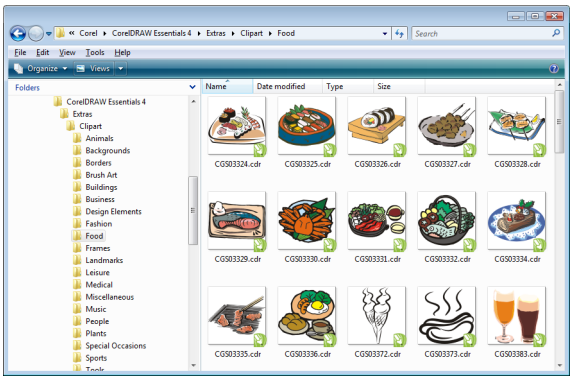
BERNINA Embroidery Software contains hundreds of ready-to-stitch designs including many new attractive ornaments, samples and digitizing backdrops. Design files (ART files) and images (BMP, JPG, and WMF files) can be found in your **My Designs - Embroidery Software 6** folder. See also Digitizing with Backdrops and Viewing design information in the Onscreen Manual.

BERNINA Portfolio displays embroidery design thumbnails and limited design information. You can filter the contents of the display window to show only certain embroidery file types. See

Browsing designs in folders in the Onscreen Manual for details.



CorelDRAW® Essentials 4 itself is packaged with a selection of clipart which can be used as digitizing backdrops or converted directly into embroidery. See also Browsing clipart in the Onscreen Manual.



Caution Included artwork (clipart) and embroidery designs can only be used for personal use – i.e. they cannot be commercially sold in any form. Changing the medium – i.e. clipart to embroidery or embroidery to clipart – does not remove copyright protection.

Hoops and grids

Fabrics should be hooped before stitching out on the machine. BERNINA Embroidery Software gives you a wide range of standard factory-supplied hoops to select from. Grid lines help you accurately align or size embroidery objects.

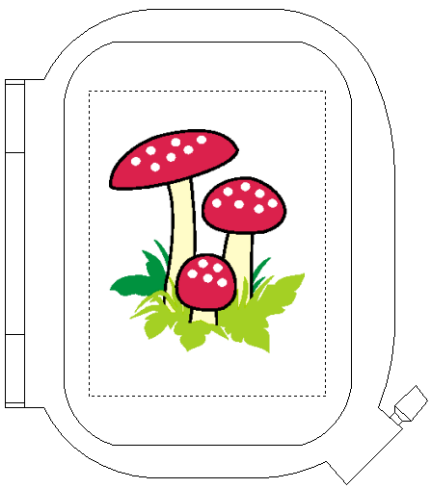
Displaying the hoop

Click Show Hoop (General toolbar) to view the hoop. Right-click to change settings.

Whenever you create a new design, a single hoop representing the one you attach to your embroidery machine appears by default in the Design Window. As you position objects, the hoop position adjusts automatically so that it is always centered around objects in the window. See also Hooping Designs in the Onscreen Manual.

To display the hoop

- Click the **Show Hoop** icon to turn on the hoop display.



- Click the **Show Hoop** icon again to turn off the hoop display.

Displaying the grid

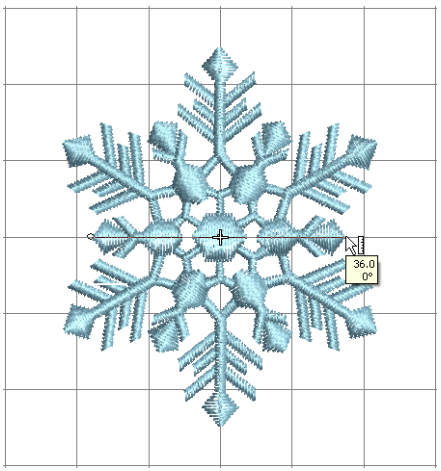
Click Show Grid (General toolbar) to show or hide the grid. Right-click to change the Grid settings.

Use grid lines to help accurately align or size embroidery objects. You can show or hide the grid.

Tip You can change the grid spacing, select a reference point and turn **Snap to Grid** on or off in the **Options** dialog. See Setting grid options in the Onscreen Manual for details.

To display the grid

- Click the **Show Grid** icon to turn on the grid display.



- Click the **Show Grid** icon again to turn off the grid display.

Measuring distances onscreen

Measure the distance between two points in the Design Window using the **Measure** command. This command displays coordinates, distance and angle of the mouse pointer from a point corresponding to the center of a hoop in an empty design. View the measurements in the Status Bar or in a tooltip. See Interpreting pointer position values in the Onscreen Manual for details.

Tip For more accurate results, zoom in before you measure. The measurement is always the actual size, and is not affected by the zoom factor.

To measure a distance onscreen

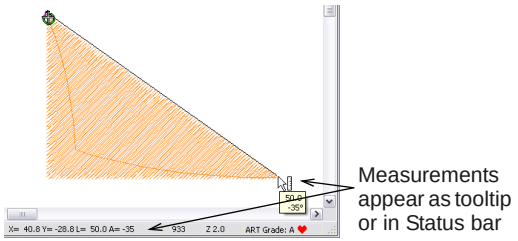
1. Select **View > Measure** or press **M**.
2. Click the start point.
3. Move the pointer to the end point and hold the mouse still.

   The following information displays in the **Status Bar**:

   - Position coordinates of the end point (**X=, Y=).**
   - Length of the measured line **(L=).**
   - Angle of the line relative to the horizontal **(A=)**.

   Measurements are shown in millimeters or inches, depending on the option selected in the MS Windows® Control Panel. See your

MS Windows® documentation for more information.



Tip If activated, length and angle measurements will also appear in a tooltip. See Setting other general options in the Onscreen Manual for details.

4 Press **Esc** to finish.

Using commands and tools

Once you start BERNINA Embroidery Software, you use commands or icons, and dialogs to complete your tasks. You select commands in BERNINA Embroidery Software in the same way as other MS Windows® applications – from menus or toolbars. Keyboard shortcuts are also available for the most frequently used commands. See Keyboard Shortcuts for details.

Selecting commands from toolbars

Toolbars provide quick and easy access to BERNINA Embroidery Software commands. Click a toolbar button to activate a command or, where applicable, right-click to set its properties.

To select commands from toolbars

- Rest the pointer over an icon to see its name in a 'tooltip'.
- Click the icon to activate the command.
- Right-click to adjust settings or activate the secondary command.
  - If the icon has both left and right-click commands, the name is split with a slash (/). For example, the **Scale by 20% Down/Up** icon lets you scale objects down by 20% when you click it, or scale objects up by 20% when you right-click.
  - For many tools, right-click accesses current command settings. For example, left-click **Lettering/Values** selects **Lettering** as the input method, while right-click accesses the **Object Properties** dialog.

Note Object properties can be modified **with** or **without** objects selected. The former affects only selected objects. The latter affects current settings. See also Applying and managing object properties in the Onscreen Manual.

Undoing and redoing commands

Use Undo (General toolbar) to undo a command.

Use Redo (General toolbar) to reapply a command which has been 'undone'.

You can undo the effects of most commands. If you change your mind, you can redo them again. BERNINA Embroidery Software remembers the last few commands you used.

To undo and redo a command

- To undo a command, click the **Undo** icon.

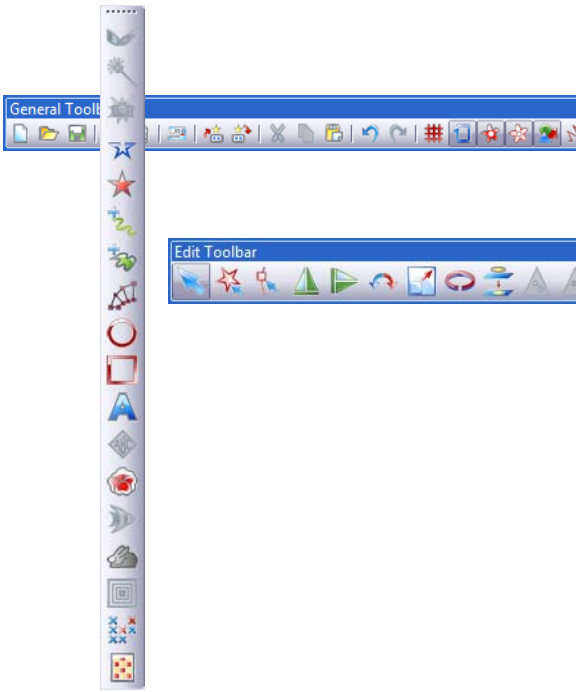
  When BERNINA Embroidery Software cannot remember more commands, **Undo** is dimmed.
- Click the **Redo** icon to re-apply an 'undone' command.

Moving and docking toolbars

Toolbars provide quick and easy access to BERNINA Embroidery Software commands. Toolbars are 'dockable'. This means you can move them around the Design Window.

To move or dock a toolbar

- To move a toolbar to a more convenient location, click and drag it:
  - Toolbars are dockable left, right, top and bottom.
  - They can be 'floated' anywhere in the Design Window.



- To dock it in its normal position, double-click the toolbar title.

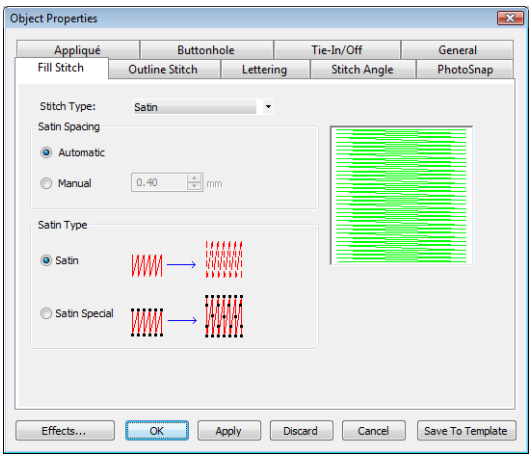
Accessing object properties

Use Object Properties (General toolbar) to set current properties or properties of selected objects.

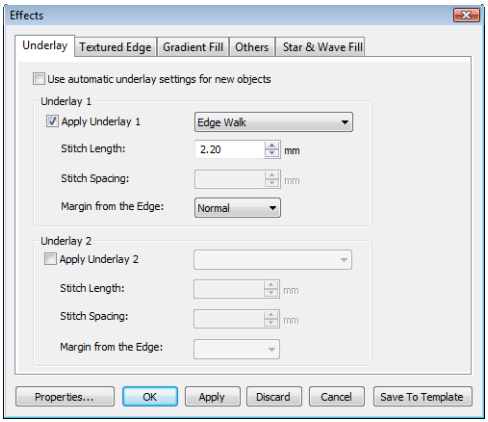
Designs created in BERNINA Embroidery Software are composed of 'embroidery objects'. They are called 'objects' because they are discrete entities which can be manipulated independently of each other. Each object has certain characteristics or 'properties' such as color, size, position, and so on. The most important dialog in BERNINA Embroidery Software is the **Object Properties** dialog. See also Applying and managing object properties in the Onscreen Manual.

To access object properties

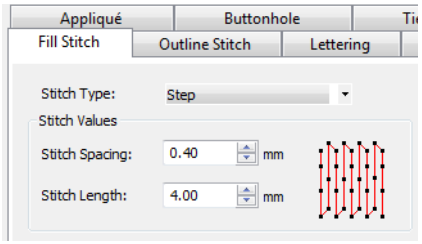
- Open the **Object Properties** dialog by any of the following means:
  - Click the **Object Properties** icon.
  - Select **Settings > Object Properties**.
  - Double-click or right-click any object in the Design Window.



- Select a tab to access the object property set you want to adjust.
- Use fields, dropdown lists, radio buttons, checkboxes, and slider controls to key in or adjust settings.
- Click the **Effects** button to access a separate set of more specialized object property settings such as Underlay, Textured Edge, Gradient Fill, etc.



Note This dialog, in turn, includes a **Properties** button which opens the **Object Properties** dialog. You can choose to close the **Object Properties** dialog automatically whenever the **Effects** dialog is opened, and vice versa. See Setting other general options in the Onscreen Manual for details.



Tip Graphic tips are incorporated into the **Object Properties** dialog to give you visual feedback on particular settings. These are displayed whenever you hover the mouse over a control. For example, with the mouse placed over the **Stitch Spacing** control, a graphic tip appears beside it.

- Apply settings by means of the **Apply** button at the bottom of the dialog or by pressing **Enter**.
  - If one or more objects are selected, changes are applied to all relevant objects.
  - If no objects are selected, changes are made to the current settings – these will affect any newly created objects.
  - If you have modified settings on a number of tabs, all changes that can be applied will be applied.
- Click the **Save to Template** button to save settings to the current template.

  These become the defaults whenever you create new files based on this template. See Managing design templates in the Onscreen Manual for details.
- Click the **Discard** button or press the **Esc** key to discard any changes.
- Click **Close** to close the dialog and discard any pending changes.

CHAPTER 4
VIEWING DESIGNS

BERNINA Embroidery Software provides many viewing features to make it easier to work with your design. Zoom in on an area to see more detail or view the design at actual size. Show or hide various design elements with the available display settings. Preview an existing design in different colors on different fabrics.

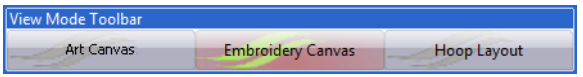
When working with embroidery designs, you need to understand the stitching sequence. You can check a design's stitching sequence in BERNINA Embroidery Software by 'traveling' through it stitch-by-stitch. You can also check the sequence by simulating the design stitchout onscreen.

BERNINA Embroidery Software also provides information about designs in a variety of ways and formats. Before even opening BERNINA Embroidery Software or your design, you can check some design information for ART files directly from MS Windows® Explorer. You can view stitching details about a design in the Design Properties dialog. Also the Print Preview provides essential design information, including a design preview, the size of the design, color sequence and any special instructions.

This section explains the design viewing modes available in BERNINA Embroidery Software as well as the various design viewing settings. It describes zooming and panning as well as how to view the stitching sequence. It covers displaying design backdrops and changing backgrounds. It also explains how to obtain information about your designs.

Viewing modes

While digitizing, different viewing modes are available for different purposes. Depending on your product level, BERNINA Embroidery Software provides a number of viewing modes which are accessed via the **View Mode** toolbar.



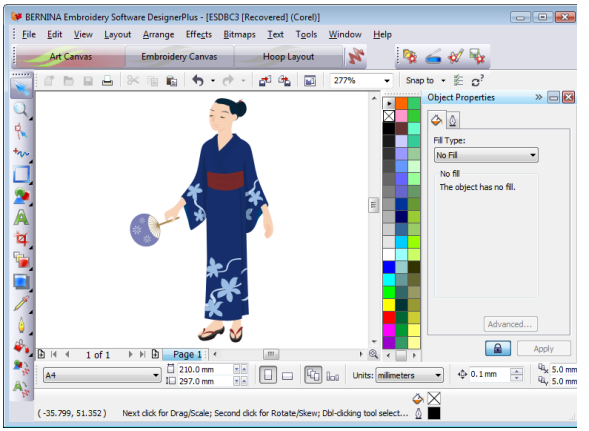
The application has one workspace or 'Design Window' but you interact with it in separate modes.

Art Canvas mode

Load, edit and save graphics as a backdrops for embroidery digitizing. Includes entire suite of CorelDRAW® Essentials 4 drawing tools. In addition, it provides capabilities to convert vectors and vector text directly to embroidery objects.

In Art Canvas mode, the View Mode toolbar includes the Show Embroidery button to toggle embroidery display on or off.

Below is a screen image of the **Art Canvas** workspace which is accessed via the **View Mode** toolbar. This mode allows you to create and edit vector graphics using the CorelDRAW® Essentials 4 toolset which offer many sophisticated techniques for drafting outlines and shapes onscreen.



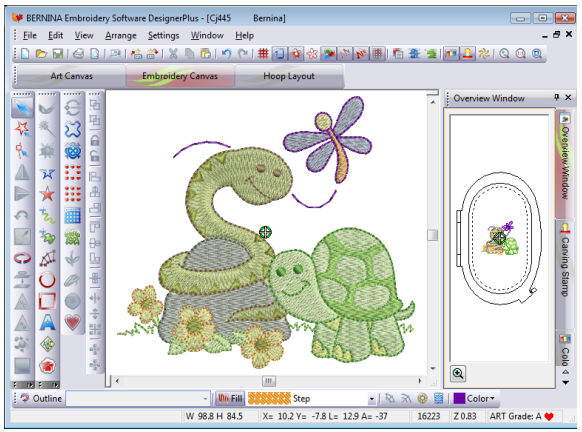
In addition to the CorelDRAW® Essentials 4 toolset, **Art Canvas** provides capabilities to convert vectors and vector text directly to embroidery objects. Vector graphics or text created or imported into the **Art Canvas** can be converted directly to embroidery designs. You can use **Art Canvas** to insert or paste third-party vector graphics such as clipart for use in embroidery designs. Alternatively, insert, paste or scan bitmap artwork for use as digitizing templates or 'backdrops'. See Loading pictures in the Onscreen Manual for details.

Note For a full description of the CorelDRAW® Essentials 4 tools, refer to the electronic User Guide available via the Windows **Start > Programs** group. Alternatively, use the onscreen help available from the **Graphics** mode **Help** menu.

Embroidery Canvas mode

Digitize and edit embroidery designs. Show embroidery shapes as well as graphics. View designs realistically in simulated 3D.

Below is a screen image of the **Embroidery Canvas** workspace which is accessed via the **View Mode** toolbar. This mode allows you to create and edit embroidery objects using the embroidery digitizing toolset. See also BERNINA Embroidery Software interface.



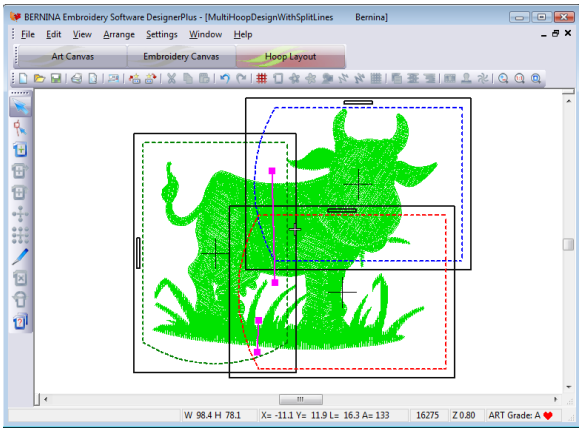
Use this mode when you want to create embroidery from digitizing 'backdrops'. Various types of image file can be loaded in BERNINA Embroidery Software. See also Digitizing with Backdrops in the Onscreen Manual.

Embroidery Canvas also offers a graphical representation of what the final embroidery will look like. Use **Show Artistic View** together with a background fabric to see how your design will look when stitched out. See also Changing backgrounds.

Hoop Layout mode

View and edit multi-hoopings. If embroidery is too large or contains multiple designs spaced around an article, split into multiple hoopings.

Below is a screen image of the **Hoop Layout** workspace which is accessed via the **View Mode** toolbar. If your embroidery is too large or contains a number of designs spaced around an article, you can split it into multiple hoopings. This means you can create embroidery designs that are larger than it is possible to stitch out on a single hoop. **Hoop Layout** allows you to set up the position and sequence of each hoop. See Hooping large designs for details.


BERNINA Embroidery Software DesignerPlus - [MultiHoopDesignWithSplitLines Bernina]
File Edit View Arrange Settings Window Help
Art Canvas
Embroidery Canvas
Hoop Layout

Design viewing settings

You can show or hide design elements in **Embroidery Canvas** with a variety of display settings. See a graphical representation of the final embroidery. Show or hide needle penetration points and stitches themselves. Or show/hide selected colors.

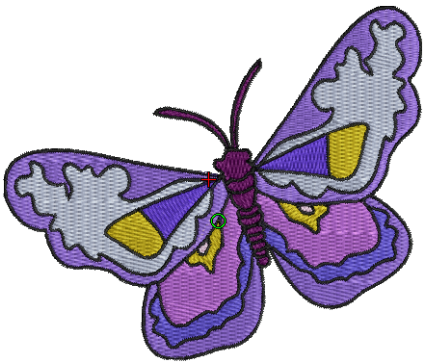
Viewing simulated embroidery

Click Show Artistic View (General toolbar) to toggle artistic or 'stitchout' view on/off.

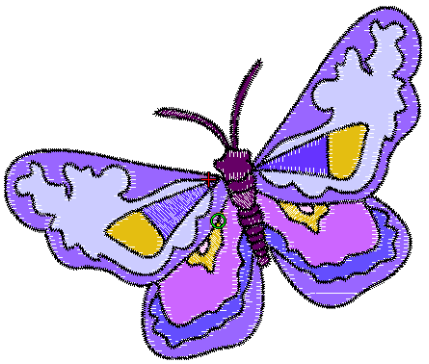
With **Artistic View**, you can see a graphical representation of the final embroidery.

To view simulated embroidery

- To view simulated embroidery (Artistic View), toggle the **Show Artistic View** icon on.



- To view embroidery stitches (Stitch View), toggle the **Show Artistic View** icon off.



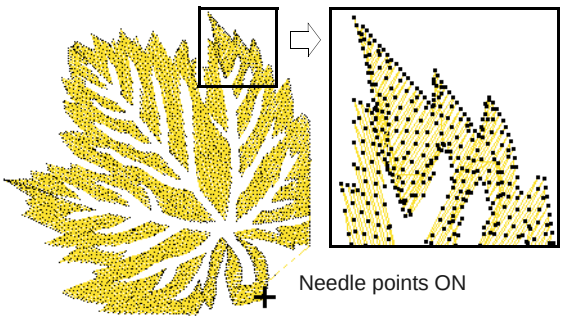
Viewing needle points

Select Needle Points (View menu) to show or hide the needle points in a design.

In **Embroidery Canvas**, you can show or hide needle points. For example, you may want to view needle points to select stitches for editing. See also Editing Stitches in the Onscreen Manual.

To view needle points

- To show or hide needle points, select **View > Needle Points**.



Needle points ON

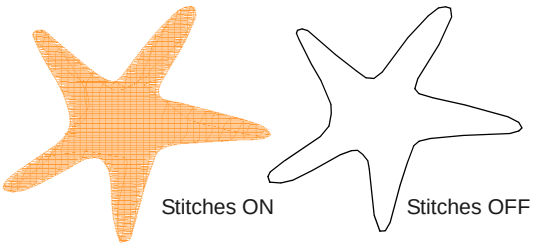
Viewing stitches and outlines

Click Show Stitches (General toolbar) to toggle stitch view on/off.

You can show or hide stitches and object outlines in any viewing mode as you work. Hide stitches to see outlines more clearly when reshaping. See Reshaping and Editing Objects in the Onscreen Manual for details.

To view stitches and outlines

- Click the **Show Stitches** icon to turn stitches on or off.



Viewing objects by color

Select By Color (View menu) to isolate design elements by color.

To help you isolate individual design elements for checking or manipulation, the **View By Color** function lets you view objects by color. This is particularly useful when you are resequencing objects by color. See also Resequencing objects by color in the Onscreen Manual.

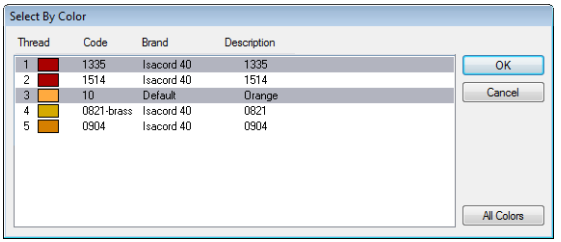
Note You will need to ungroup the design before you can view object by color.

To view objects by color

1 Create or open a design.

2 Select **View > By Color**.

The **Select By Color** dialog opens.



3 Select the colors you want to view.

- To select a range, hold down **Shift** as you click.
- To select multiple items, hold down **Ctrl** as you click.

4 Click **OK**.

The design appears with only those colors you selected in view.

5 To view all colors in the design, select **View > By Color** again and click **All Colors**.

6 Click **OK**.

Tip The **Color Film** provides another way to view design objects. See Viewing and selecting color blocks for details.

Zooming and panning

Use the **Overview Window** and **Zoom** functions to quickly examine your design at different degrees of magnification.

Tip The **Status Bar** displays the current 'zoom factor'. See Starting BERNINA Embroidery Software for details.

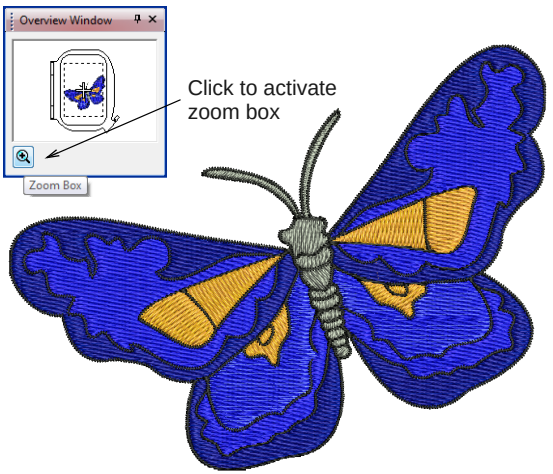
Viewing designs in overview

Use the Overview Window to view design thumbnails. The window updates whenever you make a change and can be used to zoom into or pan across the Design Window.

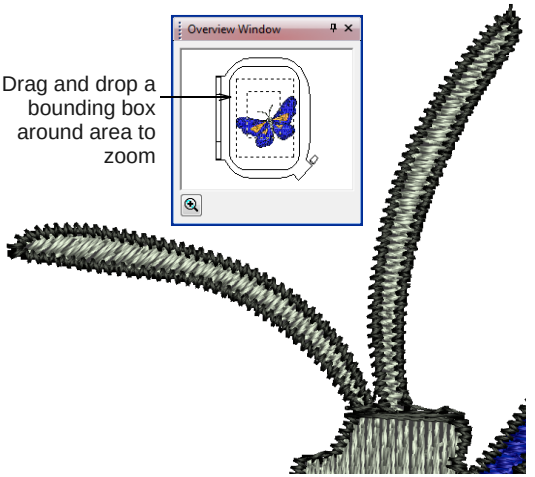
To view designs in overview

1 Select **View > Overview Window**.

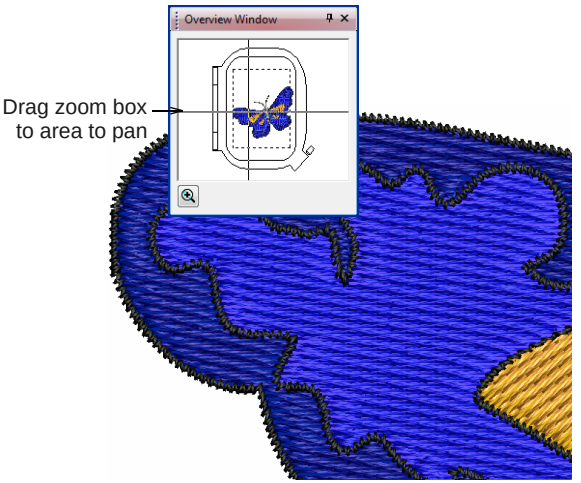
The **Overview Window** opens.



2 To zoom in or out, click the **Zoom** button on the Overview Window and drag a bounding box around the area to zoom and drop.



3 To pan across the design, move the cursor inside the zoom box – it changes to a four-way arrow cursor – and drag and drop.



Zooming in and out

Click Zoom Box (General toolbar) to zoom in and out of the Design Window. Use it also to zoom in on bounded areas of the screen.

Click Show All (General toolbar) to show the whole design.

Click Show 1:1 (General toolbar) to show the design at the correct size.

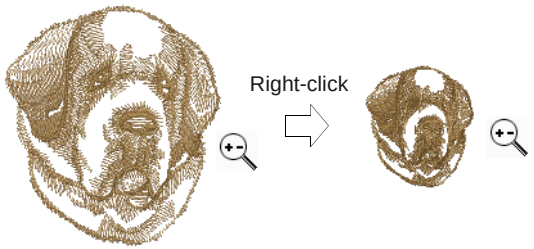
Magnify your view of the design by zooming in on individual stitches or details, or zoom out to display more of the design in the window. The current zoom factor is shown at the lower right corner of the screen. See also Keyboard Shortcuts.

Note To make sure your design is being displayed at the correct size, calibrate your monitor. See Calibrating the monitor in the Onscreen Manual for details.

To zoom in and out

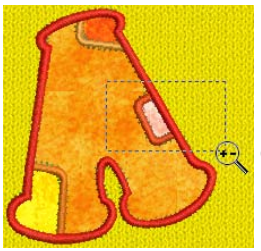
- Click the **Zoom Box** icon or press shortcut letter **B**.

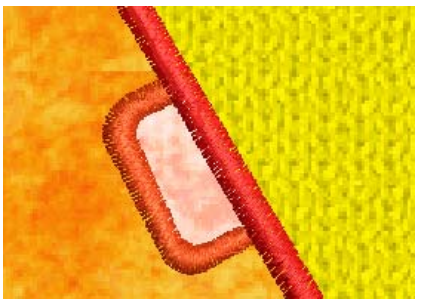
  The cursor becomes a magnifying glass.
- Right-click in the Design Window to zoom out – the view zooms out to half the previous screen magnification, centered at the point you clicked.



Tip The **Status Bar** displays the current 'zoom factor'. See Starting BERNINA Embroidery Software for details.

- Left-click in the Design Window to zoom in – the view zooms to twice the previous screen magnification, centered at the point you clicked.
- Left- or right-click-and-drag a bounding box around the zoom area. Release the mouse to view the entire boxed area in the Design Window.



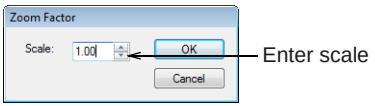


Note All bitmap images, regardless of context, maintain the same zoom scale as embroidery. Bitmaps are used in a number of contexts:

- As a backdrop or guide picture for digitizing: See Digitizing with Backdrops in the Onscreen Manual for details.
- As a background to simulate the stitchout fabric: See Changing backgrounds for details.

- As a fabric patch for appliqués: See Digitizing for Appliqué in the Onscreen Manual for details.

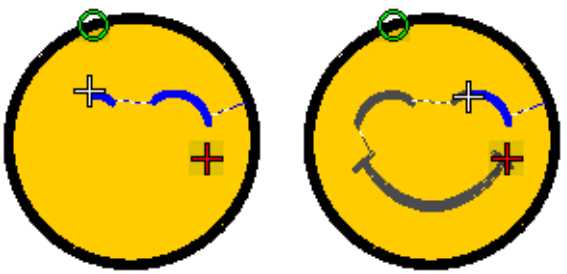
- To display the whole design, click **Show All**. Alternatively, select **View > Show All**, or press **0**.
- To display the design at actual size, click **Zoom 1:1**.
- To display the design at a particular scale, press **F** on the keyboard. Enter a scale as a percentage of the actual size, and click **OK**.



- Press **Esc**, **Enter** or **Spacebar** keys to exit **Zoom** mode.

Viewing the stitching sequence

When working with embroidery designs, you need to understand the stitching sequence. You can check a design's stitching sequence by 'traveling' through it by stitches, colors or objects. You can also check the sequence by simulating the design stitchout onscreen. BERNINA Embroidery Software simulates stitching out by changing stitches from black to their allocated thread colors as they are 'stitched'. See also Viewing and selecting color blocks.



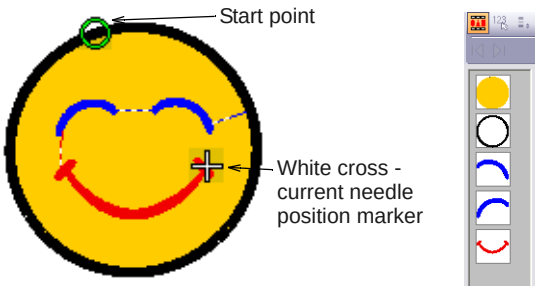
Traveling by object and color block

Use the keyboard shortcuts to travel through designs by object or color block. This technique is useful if you need to locate a specific object in order to delete it or insert another object at that point the stitching sequence. See also Keyboard Shortcuts.

To travel by object or color block

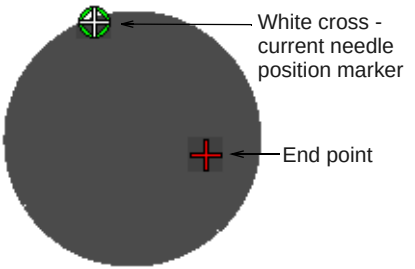
- To travel to the end of the design, press the **End** key.

  The white cross is located at the last stitch and the design displayed in the selected thread colors.

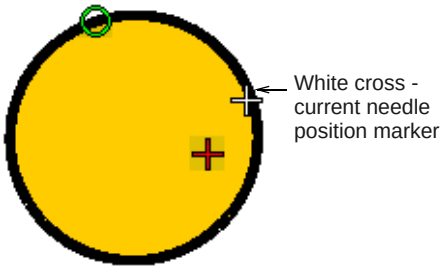


- To travel to the start of the design, press the **Home** key.

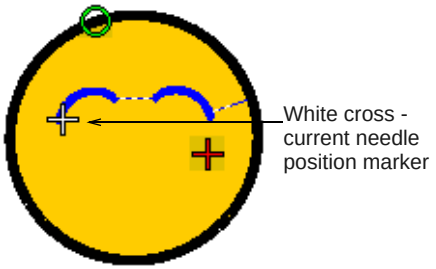
  The white cross is located at the first stitch and the entire design displayed in dark gray.



- To travel to the next object, press **Ctrl+T**.



- To travel to the previous object, press **Shift+T**.
- To travel to the next color, press the **Page Down** key.



- To travel to the previous color, press the **Page Up** key.

Tip With the **Select Object** tool activated, you can select objects while traveling through the stitching sequence. See Selecting objects by Tab key for details.

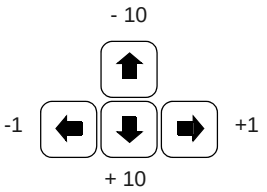
Traveling by stitches

Use the stitch travel tools or shortcut keys to travel through the design one or more stitches at a time. The current needle position is indicated by a large white cross or 'needle position marker'. Initially, this is located at the end of the design. When you travel through stitches, the needle position marker moves accordingly. The current stitch number appears in the **Status Bar**.

To travel by stitches

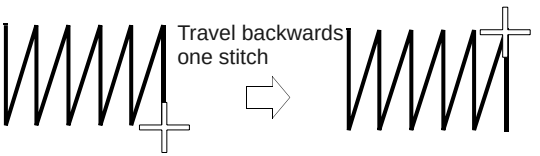
1 Select **Edit > Stitch Edit** or press **Esc**.

2 Ensure that **Select Object** is not selected, then press the arrow keys to travel by 1 or 10 stitches.



- Press the left or right arrow key to travel 1 stitch backward or forward.
- Press the up or down arrow key to travel 10 stitches backward or forward.

3 Press the **+** or **-** keys located on the keypad to travel by 100 stitches. The **+** key moves you forward, while the **-** key moves you backwards.

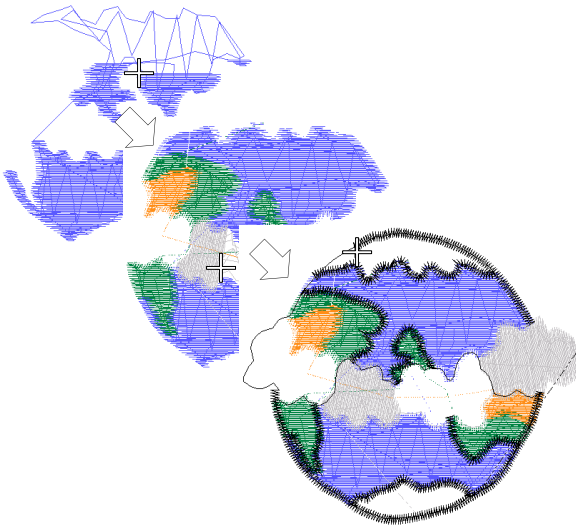


Tip If you travel outside the visible area, press the **C** key to center the current stitch on the screen.

Simulating design stitchouts

The **Slow Redraw** function lets you simulate the actual embroidery design stitchout onscreen. Use it to view design stitching and color sequence in slow motion. Redrawing can be started from any stitch in the design. Hide previously stitched parts of the design as required. With larger designs, you can choose to

scroll automatically so that the area being stitched remains onscreen.



Because **Slow Redraw** emulates the movements of the embroidery machine, you are able to make decisions about how to optimize your design in order to lessen the load on the machine. This is particularly important if you intend to make multiple stitchouts of the same design. It is good practice to perform Slow Redraw on completed designs for this reason.

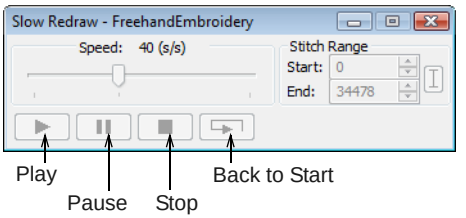
To simulate the design stitchout

1 Switch to **Stitch View**.

Note **Slow Redraw** cannot be used with **Artistic View**.

2 Select **View > Slow Redraw** or press **Shift+R**.

The **Slow Redraw** dialog opens.



3 To redraw only a section of the design, specify the start and end stitch in the **Stitch Range** field.

4 Use the slider bar to set the redraw speed.

5 Click the **Play** button.

The design is redrawn onscreen according to stitching sequence and selected speed.

6 Adjust control buttons as required:

Button	Function
Speed	Use the slider bar to adjust the redraw speed in 'real time'.
Pause	Pauses the redraw, letting you resume where you left off.
Stop	Stops the redraw and returns to the beginning of the design.
Back to Start	Redraws from the beginning of the design.

Backdrops and backgrounds

You can display a backdrop while you digitize. Hide it temporarily while you work, or dim it for easier stitch viewing. You can also change the

background color of the Design Window to match the color of your fabric.

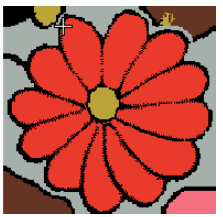
Viewing backdrops

- Use Show Pictures (General toolbar) to toggle backdrops on/off.
- Use Dim Artwork (General toolbar) to dim backdrops in order to show stitches more clearly when digitizing.
- Use Show Vectors (General toolbar) to toggle on/off display of vector graphics.
- Use Show Appliqué Fabric (General toolbar) to toggle appliqué fabrics/colors on/off.

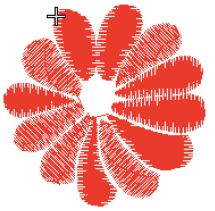
You can display a backdrop, bitmap or vector, while you digitize, or hide it temporarily. Hiding backdrops does not delete them from the design. You can also dim backdrops to make it easier to view stitches. See also Digitizing with Backdrops.

To view backdrops

- To toggle backdrop pictures on/off – both bitmap and vector graphics – click the **Show Pictures** icon. See also Importing images into BERNINA Embroidery Software.



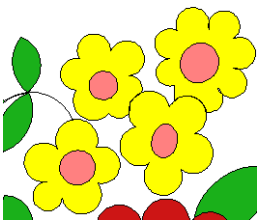
With Show Pictures ON



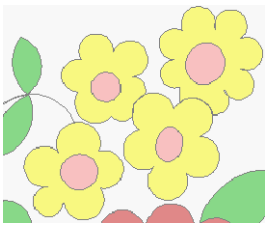
With Show Pictures OFF

Note The drawing appears dimmed if **Dim Picture** is selected.

- To dim a backdrop, click the **Dim Artwork** icon.



Original bitmap image

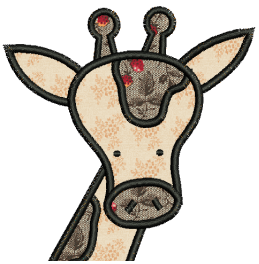


Dimmed bitmap image

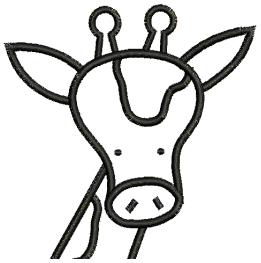
Note To return to full color, click the **Dim Picture** icon again.

- To toggle backdrop vector graphics on/off, click **Show Vectors** icon.

- Click the **Show Appliqué Fabric** icon to show appliqué fabrics/colors. See also Digitizing for Appliqué.



With Show Appliqué Fabric ON



With Show Appliqué Fabric OFF

- To hide the fabrics/colors, click the **Show Appliqué Fabric** icon again.

Changing backgrounds

Select Fabric Display (Settings menu) to change background color and fabrics.

Use the Show Appliqué Fabric tool (General toolbar) to toggle fabric display on or off.

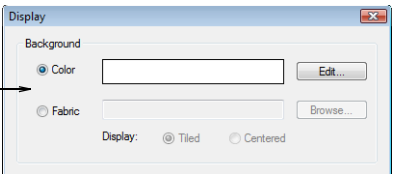
In BERNINA Embroidery Software, you can change the background color of the Design Window to match the color of your fabric. Or you can select a background fabric for more realistic previews and presentations. The background is saved with the design.

Tip Use the **Show Appliqué Fabric** toggle to turn appliqué fabrics/colors display on/off. See Placing fabrics in Auto Appliqué designs in the Onscreen Manual for details.

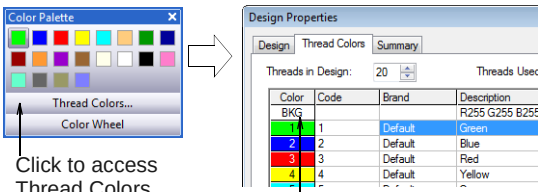
To change backgrounds

1 Select **Settings > Fabric Display**.

The **Display** dialog opens.



Tip You can also access this dialog using **Settings > Thread Colors** or clicking the link in the **Color Palette** dialog. Then double-click **BKG** in the **Thread Colors** tab. See Thread Colors and Charts in the Onscreen Manual for details.

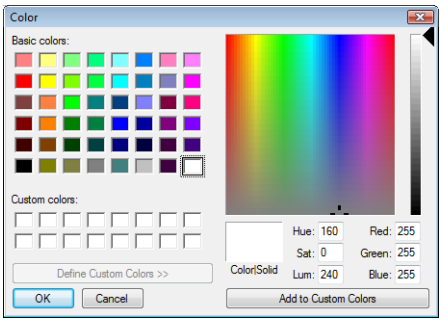


2 Select the background type you want:

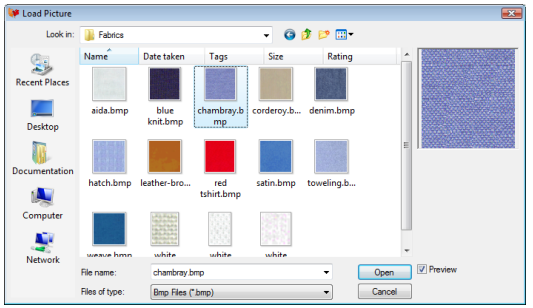
Option	Purpose
Color	Select a background color.
Fabric	Select a background fabric.

3 Select the color or fabric you want to use:

- To select a background color, click **Edit** and select a color from the **Color** dialog.



- To select a fabric, click **Browse** and select a fabric from the **Load Picture** dialog. Fabrics are located in the ..\Program Files\BERNINA\Embroidery Software 6\fabrics folder.



Tip If you choose fabric, you can center or tile the image in the Design Window. If the bitmap is large enough to fill the entire window, select **Center**. Otherwise, select **Tile**.

4 Click **OK**.

Yellow background | Denim background

Note The background is saved with the design.

Viewing design information

BERNINA Embroidery Software provides information about designs in a variety of ways and formats. Before even opening BERNINA Embroidery Software or your design, you can check some design information for ART files directly from MS Windows® Explorer. You can view stitching details in the **Design Properties** dialog. The **Print Preview** tool provides essential design information, including a design preview, the size of the design, color sequence and any special instructions.

Viewing design properties

Use Design Properties (File menu) to view stitching details about a design.

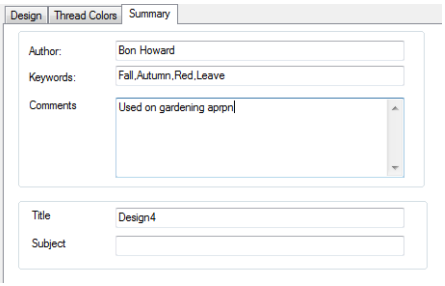
You can check software version number and other design information through the **Design Properties** dialog. Stitching details are also provided. Most of the fields cannot be modified directly.

To view design properties

1 Select **File > Design Properties**.

The **Design Properties > Design** dialog opens. This tab contains information about height and width and stitch count and colors. The data is extracted from the design and cannot be modified.

2 Select the **Summary** tab to view or enter summary information about the design.



3 Click a field and enter any text which will help you identify the design at a later date.

Note Information from this tab is included on the Print Preview as well as the **Summary** tab of the **Windows Properties** dialog. See Viewing design information in Windows Explorer and Previewing designs for details.

4 Click **OK**.

Viewing design information in Windows Explorer

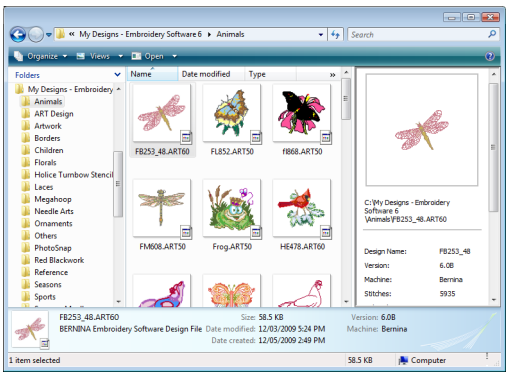
Before opening ART files, you can view design thumbnails and details via MS Windows® Explorer. The **Properties** dialog displays a design preview together with design information such as stitch count, number of stops and color changes. You can also view general file information, such as file size and modification dates. See also Design Management.

Note This same dialog can be accessed from within the **Open** dialog in BERNINA Embroidery Software. See also Opening designs.

To view design information in Windows Explorer

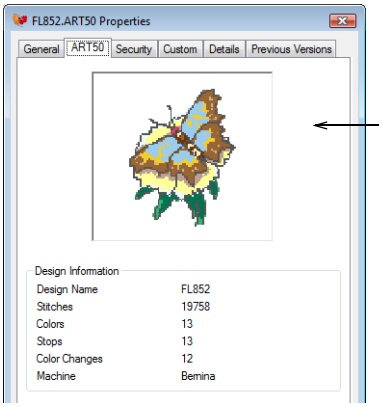
1 In Windows Explorer, select the folder you are interested in.

Design thumbnails are displayed in the Windows Explorer window.



2 Right-click a file and select **Properties** from the popup menu.

The **Properties** dialog opens.



3 Check the design information, or click the other tabs for general file information.

Tip The **Summary** tab provides some of the same information entered in the **Design Properties > Summary** tab in BERNINA Embroidery Software. See Viewing design properties for details.

4 Click **OK**.

Previewing designs

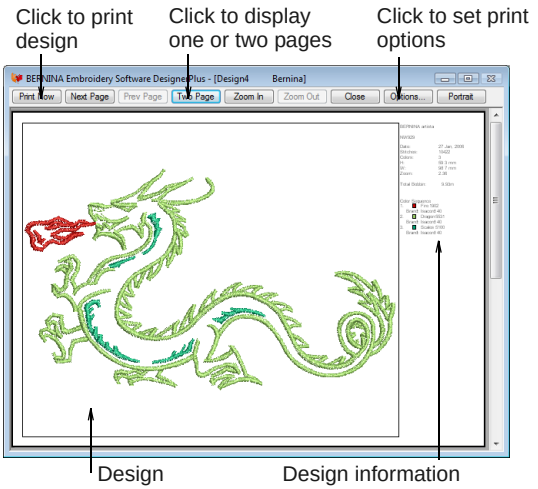
Click Print Preview (General toolbar) to preview the print preview onscreen.

The **Print Preview** contains a design preview and essential design information, including the size of the design, color sequence and any special instructions. See also Printing designs in the Onscreen Manual.

To preview designs

1 Click the **Print Preview** icon.

The design preview displays in a preview window.



2 Adjust the view as required:

- To change the orientation of the paper, click **Landscape** or **Portrait**.
- To change the information that displays, and set printing preferences, click **Options**. See also Setting print options for embroidery in the Onscreen Manual.
- Click **Zoom In** to read the design information or view the design preview more closely. Large designs may be displayed over a number of pages.
- To print the design, click **Print**.
- To close the print preview, click **Close**.

CHAPTER 5
SELECTING OBJECTS

BERNINA Embroidery Software provides various means for selecting the objects comprising an embroidery design. These include techniques such as point and click, bounding box selection, and multiple object selection. You can select all objects in a design or individual ones for precise modification. BERNINA Embroidery Software allows selection of object outlines or fill stitches.

Note Designs must be ungrouped before objects can be selected. See Ungrouping objects in the Onscreen Manual for details.

This section describes how to select objects using the selection tools and keyboard. It also shows how to select color blocks or individual objects using the Color Film.

Selecting objects by point and click

Click Select Object (Edit toolbar) as necessary (generally activated by default), and click objects to select.

The simplest way to select objects is by pointing and clicking with the mouse with the **Select Object** tool activated. Using **Shift** and **Ctrl** keys, you can select multiple objects. Both outlines and/or filled areas can be selected. Clicking an outline selects an object even if another is above it. Where you have a mixture of closed objects, you can select object outlines or fill stitches.

Note With low-density stitching and/or at high zooms, it is actually possible to click between stitches and not select the object.

To select objects by point and click

- Click the **Select Object** icon.

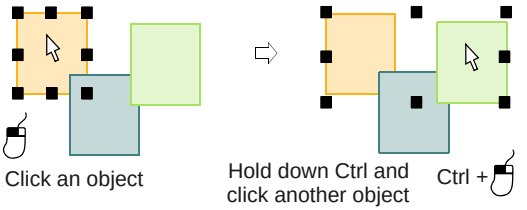
- Click an outline to select the object.

- Click the fill behind a outline object to select the filled object.

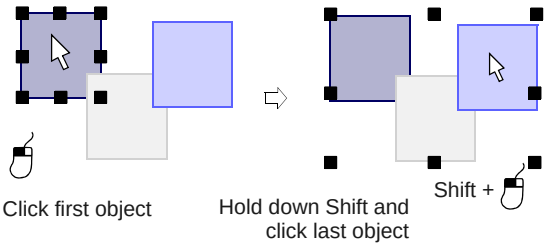
- Click the fill to select an object even if it lies within the bounds of a larger object.

Tip To select an object which is behind another object, zoom in and click the outline. Alternatively, position the pointer over the object, hold down the **2** key, and click until the object is selected. Each click selects the next overlapping object.

- To select multiple items, hold down **Ctrl** as you click.



- Select a range of objects by holding down **Shift** while you click the first and last objects in the range.



Selecting objects by bounding box

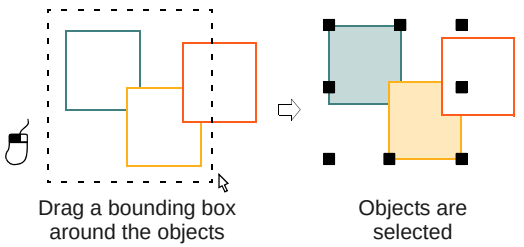
Use Select Object (Edit toolbar) and drag a bounding box around the object to select.

With the **Select Object** tool activated, you can select objects by dragging a bounding box around them.

To select objects by bounding box

1. Click the **Select Object** icon.
2. Drag a bounding box around the objects you want to select.

Objects are selected when you release the mouse button.



Note Unless they have already been grouped, only objects completely within the bounding box will be selected when you release the mouse button. See also Grouping objects in the Onscreen Manual.

Selecting objects by Polygon Select

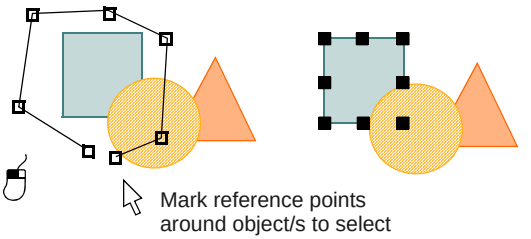
Use Polygon Select (Edit toolbar) to select objects with a bounding box.

Use **Polygon Select** to select objects with a bounding box.

To select objects by Polygon Select

1. Click the **Polygon Select** icon.
2. Mark reference points around the object/s you want to select.

   The objects you want to select must be completely within the outline.
3. Press **Enter** to select.



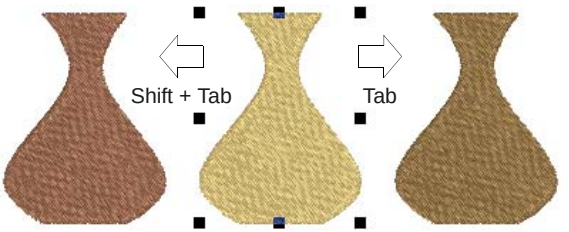
Selecting objects by Tab key

Click Select Object (Edit toolbar) and press Tab or Shift + Tab to tab between objects.

With the **Select Object** tool activated, you can select the first or last object in the design sequence using the **Tab** key. If an object is selected, you can select the object before or after it in the stitching sequence. See also Reshaping next or previous objects in the Onscreen Manual.

To select objects by Tab key

- Click the **Select Object** icon.
- With an object selected, do one of the following:
  - Press **Tab** to select the next object in the stitching sequence.
  - Press **Shift+Tab** to select the previous object.



- With **no** objects selected, do one of the following:
  - Press **Tab** to select the first object in the stitching sequence.
  - Press **Shift+Tab** to select the last object.

Tip Hold down the **Ctrl** key to select multiple items as you tab between them.

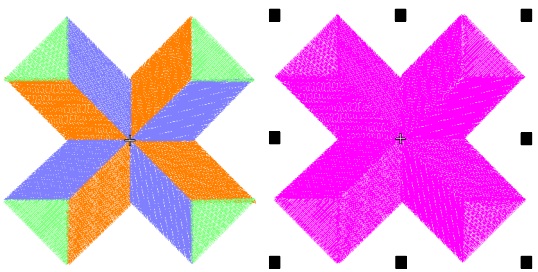
Selecting all objects in a design

Select all objects to apply changes to a whole design. See also Keyboard Shortcuts.

To select all objects in a design

- Select **Edit > Select All** or press **Ctrl+A**.

  Sizing handles appear around the entire design.



No objects selected | All objects selected

- To deselect, select **Edit > Deselect All**, press **X** or **Esc**.

Deselecting and deleting objects

Deselecting and deleting objects are basic operations which rapidly become second-nature. See also Combining objects in the Onscreen Manual.

Deselecting objects

You can cancel all selections in the design, or remove individual objects from a group of selected objects.

To deselect objects

- Cancel a selection using any of the following methods.
  - Press **Esc**.
  - Select another object.
  - Click an empty area of the background.
  - Select **Edit > Deselect All**.
- Remove an object from a selection by holding down **Ctrl** and clicking the object to deselect.

Deleting objects

Select Delete (Edit menu) to delete selected objects.

Various methods are available for deleting objects. See also Sequencing objects with Color Film in the Onscreen Manual.

To delete objects

- Select the object/s to delete, and do one of the following:
  - Press **Delete**.
  - Select **Edit > Delete**.
  - Right-click object/s in the Color Film and select **Delete** from the popup menu. See Viewing and selecting color blocks for details.

Viewing and selecting color blocks

Click Color Film (General toolbar) to view all color blocks and objects in a design.

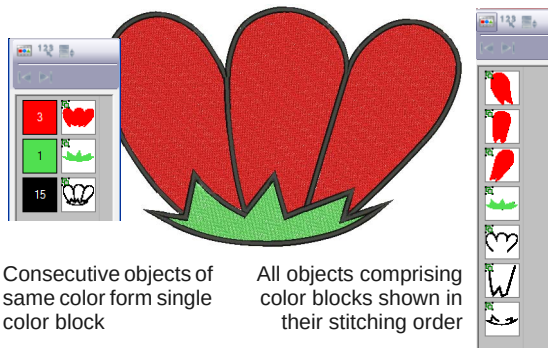
Click Show Individual Objects (Color Film toolbar) to view individual objects in order of stitching sequence.

The **Color Film** tool provides a sequential list of objects grouped by color. Use it to select and manipulate 'color blocks' – consecutive objects of the same color. In addition, you can display, select, modify and sequence individual objects. Color Film is synchronized with the Design Window and vice versa. It dynamically updates whenever you select, modify or delete objects, or create new ones. See also Sequencing objects with Color Film in the Onscreen Manual.

To view and select color blocks

- Click the **Color Film** icon.

  The **Color Film** toolbar opens displaying all color blocks in the design in order of stitching sequence.



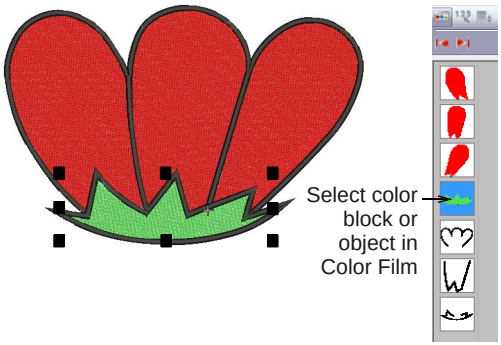
Consecutive objects of same color form single color block

All objects comprising color blocks shown in their stitching order

- Click the **Show Individual Objects** toggle to view individual objects.

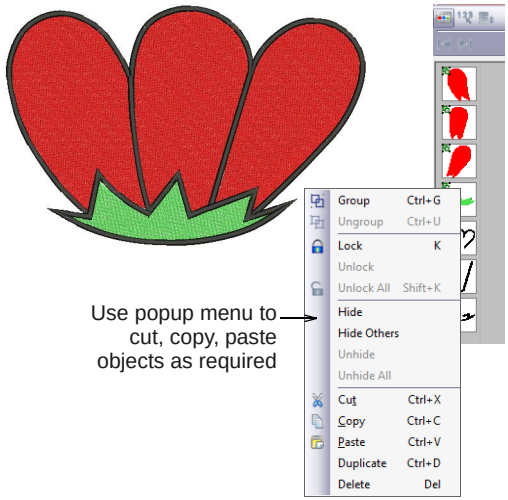
  All objects within a color block are displayed in stitching order.

- Click an icon to select the color block or object.
  - To select a range, hold down **Shift** as you click.
  - To select multiple items, hold down **Ctrl** as you click.

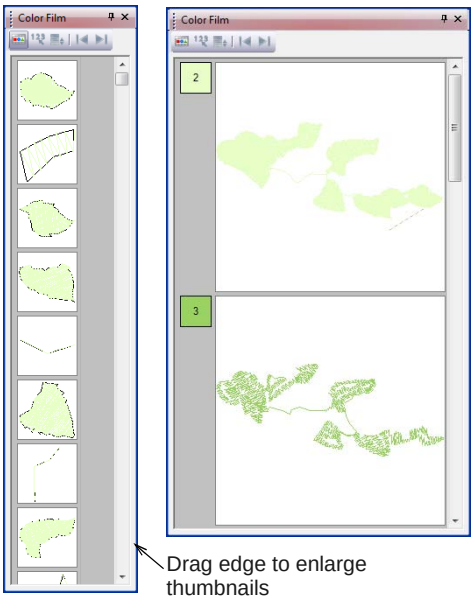


- Manipulate the color blocks as required. See also Sequencing objects with Color Film in the Onscreen Manual.

  You can quickly access popup menu commands for manipulating selected color blocks or objects by right-clicking their icons. See also Combining objects in the Onscreen Manual.



Tip To enlarge thumbnail images of color blocks or objects, click and drag the edge of the dialog.



PART II
TUTORIALS

This part of the Quick Start Guide provides a number of fully worked tutorials to help you get started with BERNINA Embroidery Software. Generally speaking, any project that can be done in a lower level product can also be done in a higher level one. But not vice versa. The tutorials assume a certain familiarity with basic techniques such as zooming and displaying stitches. Read through Part I of the Quick Start Guide before starting. For further details of procedures used here, you are referred to the Onscreen Manual. It's a good idea also to familiarize yourself with the Quick Reference. See Quick Reference for details.

Lettering tutorial

This introductory tutorial involves adding a decorative border to lettering for use on an article of clothing, table napkin or other item. It will show you just how simple and fun it is creating projects in BERNINA Embroidery Software. See Lettering Tutorial for details.

Editing tutorial

In this tutorial you will learn how to check a design and not only look for actual errors but potential errors which may affect the quality and appearance of the stitchout. You will explore methods to detect and correct errors, optimize designs and familiarize yourself with the powerful features of BERNINA Embroidery Software that enable you to accomplish these tasks. See Editing Tutorial in the Onscreen Manual for details.

Auto-Digitizing tutorial

In this tutorial you will not only learn how to automatically digitize a design but also how to enhance the embroidery automatically created. You will also check and adjust the stitching sequence to optimize the design for stitchout. See Auto-Digitizing Tutorial in the Onscreen Manual for details.

Digitizing tutorial

In this tutorial you will use a combination of manual and automatic digitizing techniques to create an embroidery design from scratch. See Digitizing Tutorial in the Onscreen Manual for details.

Monogramming tutorial

With BERNINA Embroidery Software, it is very easy to create monograms for a variety of purposes. The Monogramming feature integrates the three basic elements of a monogram – lettering, ornaments and borders. In this tutorial you will use the Monogramming tool and discover how to embellish designs to create simple and elegant monograms in a fraction of the time it takes to manually digitize the same design. See Monogramming Tutorial in the Onscreen Manual for details.

Appliqué tutorial

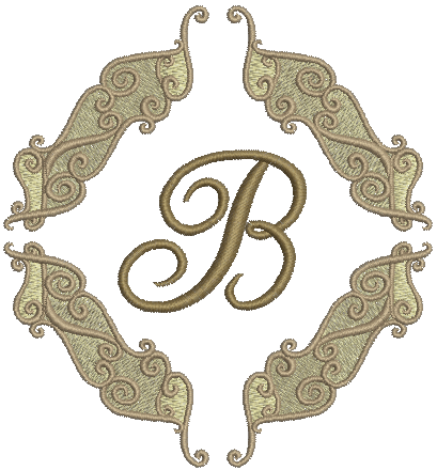
Expand your creative potential with appliqué. BERNINA Embroidery Software has a wide selection of fabrics to use in appliqué projects to help you visualize designs onscreen. In this tutorial you will learn how to implement the open-object appliqué technique in digitizing the giraffe artwork included in your software installation. See Appliqué Tutorial in the Onscreen Manual for details.

Multi-medium tutorial

In this tutorial we explore the powerful support BERNINA Embroidery Software provides for multi-medium design. Here you will combine digital print with embroidery to create a multi-medium design. See Multi-Medium Tutorial for details.

CHAPTER 6
LETTERING TUTORIAL

This introductory tutorial involves adding a decorative border to lettering for use on an article of clothing, table napkin or other item. It will show you just how simple and fun it is creating projects in BERNINA Embroidery Software. In this tutorial you will learn how to take a simple design element and add lettering to it using the alphabet and thread colors of your choice. We will also check the design for stitchout. The tutorial is designed to be used with all levels of BERNINA Embroidery Software.



Note All steps required to complete the quick-start project are provided here. For further information, however, you are referred to the Onscreen Manual.

Getting started

To create this project, we're going to use one of the sample designs packaged with your BERNINA Embroidery Software installation. Your BERNINA Embroidery Software comes with a range of artwork and embroidery designs that you can use as a starting point for your own projects. In addition to the packaged sample designs, you will find a dedicated 'Tutorials' folder which contains all the files you need to complete this and other tutorials. The final result of this and other projects is also located in this folder. You may want to view the completed project file before and/or after completing the tutorial. See also Working with design files.

Open the design sample

Use Art Canvas to load, edit and save pictures as a backdrop for embroidery digitizing.

Use Embroidery Canvas mode to create and edit embroidery designs. Show embroidery shapes as well as graphics. View designs realistically in Artistic View.

Use Open (General toolbar) to open an existing design.

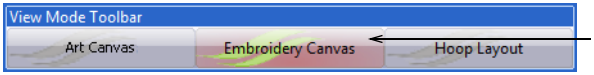
Your BERNINA Embroidery Software system comes with a range of designs that you can use as a starting point for your own projects. For this project we will use a sample border which will form the basis of our monogram design. See also Working with design files.

To open the design sample

1 Double-click the BERNINA Embroidery Software shortcut icon on the MS Windows® desktop.

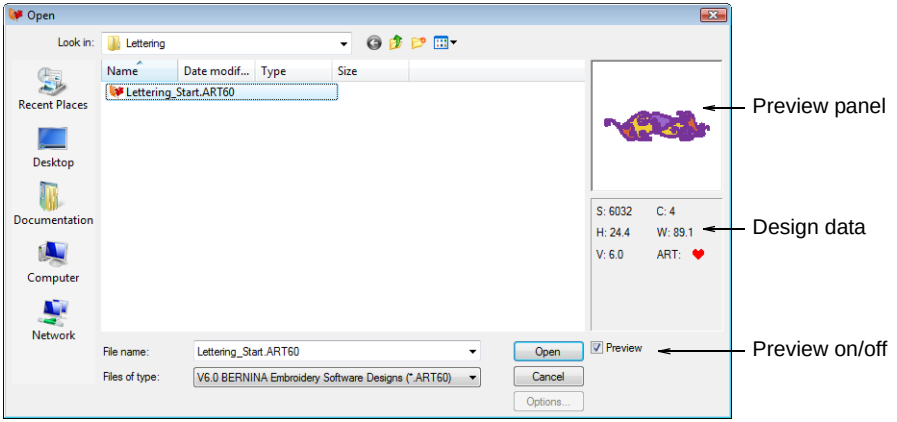
BERNINA Embroidery Software opens with a new, blank design (Design1) with the default hoop selected.

2 Choose **Embroidery Canvas** mode.



3 Click the **Open** icon.

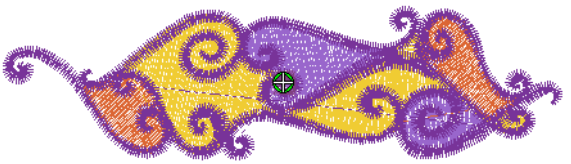
The **Open** dialog opens.



4 Navigate to the **My Designs - Embroidery Software 6** folder and select the **Tutorials > Lettering** folder.

5 Select the 'Lettering_Start.Art60' file and click **Open**.

The design opens in the Design Window.



Change views

Digitize and edit embroidery designs. Show embroidery shapes as well as graphics. View designs realistically in simulated 3D.

Click Show Artistic View (General toolbar) to toggle artistic or 'stitchout' view on/off.

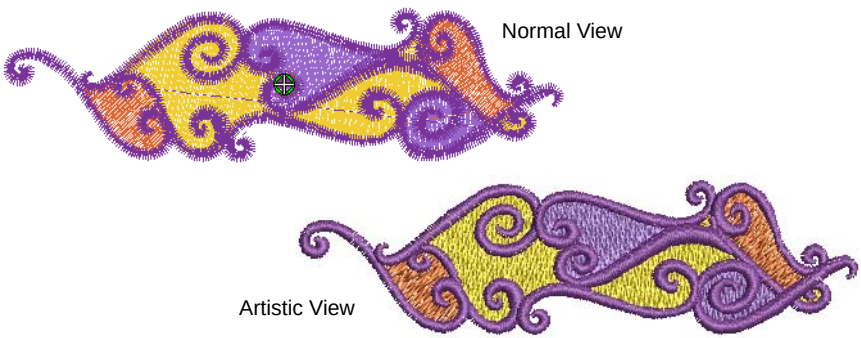
BERNINA Embroidery Software lets you open and edit all your designs in Embroidery Canvas. Artistic View shows what your design will look like after stitchout. All editing commands are also available in Artistic View. See Viewing modes for details.

Note To ensure your design is displayed in real size, you may need to calibrate your monitor. See Calibrating the monitor in the Onscreen Manual for details.

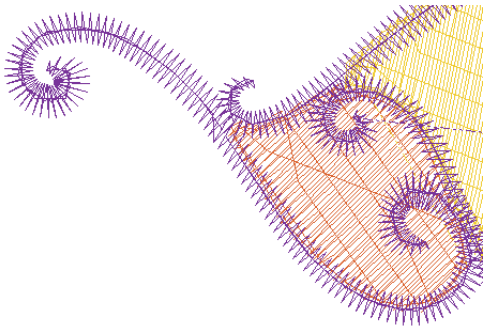
To change views

1 Choose **Embroidery Canvas** mode and click the **Show Artistic View** icon to view the design realistically in simulation.

The design appears more realistically than in normal view though it is generally harder to edit in this mode.



2 Magnify your view of the design by zooming in on individual stitches or details, or zoom out to display more of the design in the window. See Zooming and panning for details.



Tip The current zoom factor is shown at the lower right corner of the screen.

Select the hoop

Click Show Hoop (General toolbar) to turn hoop display on or off. Right-click to change hoop settings.

Use Zoom Box (General toolbar) to zoom in and out of the Design Window by clicking and right-clicking. Use it also to zoom in on bounded areas of the screen.

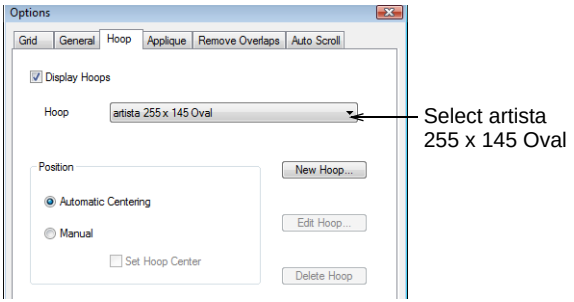
The hoop in the Design Window represents the embroidery hoop that you connect to your BERNINA home embroidery machine. The hoop stabilizes the fabric and will ideally be just big enough to fit the design to ensure the

least amount of stretch and distortion. From the range of available hoop types and sizes, select the smallest hoop which will accommodate the whole design. See also Hooping Designs in the Onscreen Manual.

To select the hoop

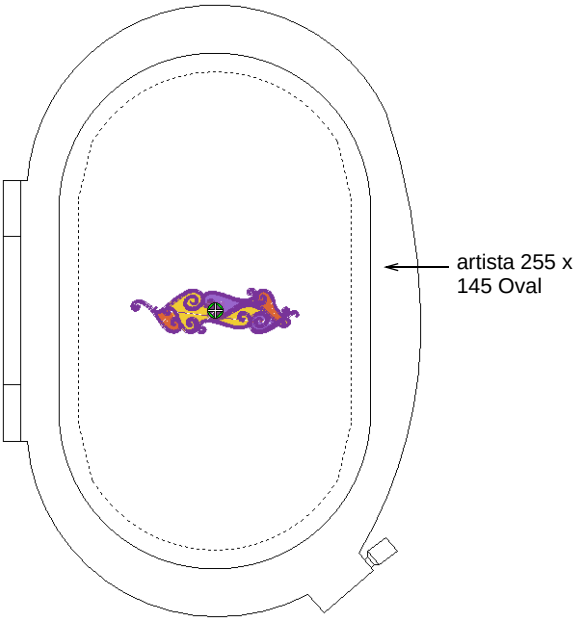
1 Right-click the **Show Hoop** icon.

The **Options > Hoop** dialog opens.



2 Select 'artista 255 x 145 Oval' from the **Hoop** list.

3 Click **OK**.



4 Zoom out to better view the hoop – select the **Zoom Box** tool and right-click the design once.

Tip Once you have selected a hoop you can toggle it on or off by clicking the **Show Hoop** icon.

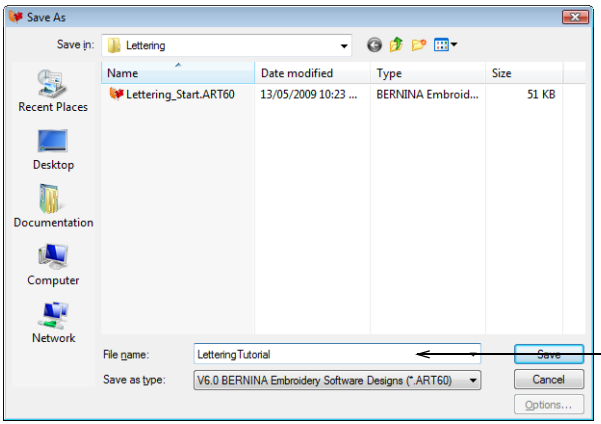
Save the design

It is a good time to save your work. You should make it a habit to save from time-to-time so as not to lose changes you have made. See also Saving designs.

To save the design

1 Select **File > Save As**.

The **Save As** dialog appears.



Tip The **Save As** dialog opens to the same location the original file is stored.

2 Enter a suitable name – 'LetteringTutorial' – in the **File Name** field.

3 Click **Save**.

Tip Subsequently, you only have to click the **Save** button or **Ctrl+S** to save any changes.

Creating the design border

We will now take the design element we've just opened, and duplicate and transform it into a border for our design.

Scale and rotate the first border

Use Select Object (Edit toolbar) to select a design element.

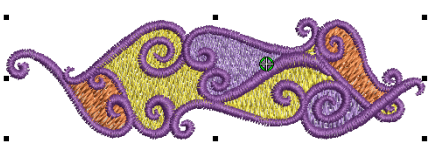
Click Scale by 20% Down/Up (Edit toolbar) to reduce selected objects by 20%. Right-click to increase selected objects by 20%.

Click Rotate 45° CCW/CW (Edit toolbar) to rotate an object or design counter-clockwise by 45°. Right-click to rotate clockwise by 45°.

First we need to reduce our design border a little. You can scale it by dragging the selection handles with the mouse or specifying the exact dimensions. As an object is scaled, the stitch count changes to preserve the current stitch density. We'll also rotate our border by 45°. See also Arranging and Transforming Objects in the Onscreen Manual.

To scale and rotate the first border

1 Click the **Select Object** icon and select the object.



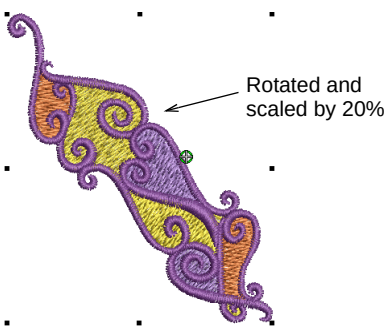
Note By default, designs are automatically grouped upon opening or insertion into another design. See Setting other general options in the Onscreen Manual for details.

2 Left-click the **Scale Down / Up** icon once.

This will scale the object down by 20%.

3 Now right-click the **Rotate** icon.

This will rotate the object clockwise by 45°.



Create a second border

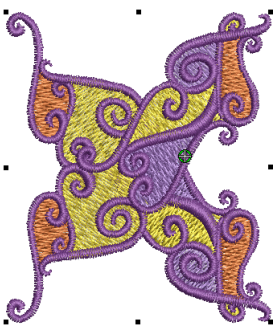
Click Mirror Vertical (Edit toolbar) to flip an object or design vertically.

Now we will take the rotated border and use it to create a second border. First we clone the original and then flip it vertically. We then nudge it into position. See Combining objects in the Onscreen Manual for details. See also Mirroring objects in the Onscreen Manual.

To create a second border

1 Press **Ctrl+D** to duplicate with the object selected.

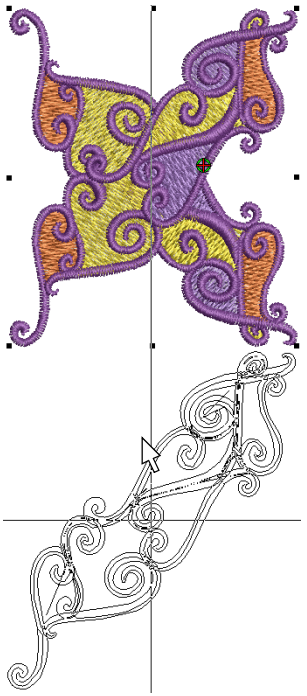
The duplicate object is placed directly on top of the original object and selected.



2 Click the **Mirror Vertical** icon.

The duplicate is mirrored vertically.

3 Click and drag the duplicate downwards leaving a small gap between tips as shown.



Second object dragged into the position leaving small gap between tips

Tip For precise positioning, hold down the **Ctrl** and **Shift** keys while dragging – movement is constrained to X or Y axes.

Create the second side

Click Mirror Horizontal (Edit toolbar) to flip an object or design horizontally.

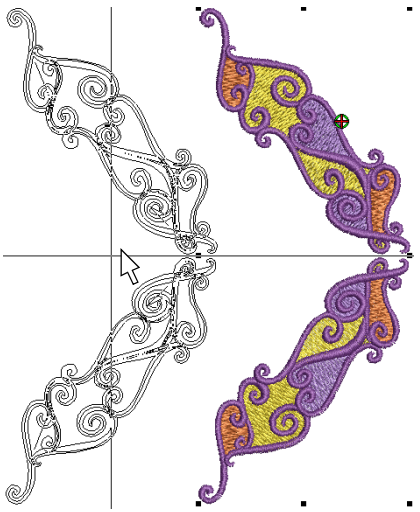
We will now take the first side of the border we have created, duplicate it, and then mirror it in the horizontal direction. See Combining objects in the Onscreen Manual for details. See also Mirroring objects in the Onscreen Manual.

Tip Save your design frequently so you don't lose your work in the event of a power or system failure. See also Saving designs.

To create the second side

1 Select **Edit > Select All** or press **Ctrl+A**.

Both objects are selected.



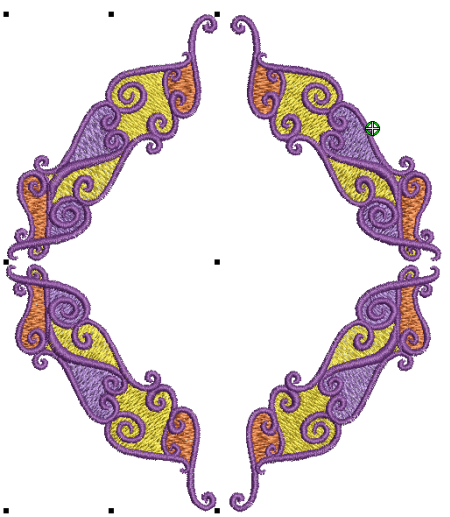
2 Right-click and drag the objects to the new position and release the mouse.

A duplicate border is created at the release point. See Cloning objects in the Onscreen Manual for details.

Tip For precise positioning, hold down the **Ctrl** key while dragging – movement is constrained to X or Y axes.

3 Click the **Horizontal Mirror** icon.

The selected objects are flipped horizontally.



Duplicate objects mirrored

4 Use the left or right arrow keys on the keyboard to 'nudge' the duplicate objects into position.

5 Deselect all objects by pressing the **Esc** key.

Adding lettering to the design

We'll now add some lettering to our monogram. You can add lettering by typing it directly into the Design Window or entering it in the **Lettering** dialog.

Tip Save your design frequently so you don't lose your work in the event of a power or system failure. See also Saving designs.

Add lettering

Use Lettering (Digitize toolbar) to add lettering directly onscreen.

We'll add our lettering by typing it directly in the Design Window. When you first create lettering, it may be too big or too small. Size can be adjusted in various ways. See also Adding lettering to embroidery designs in the Onscreen Manual.

To add lettering

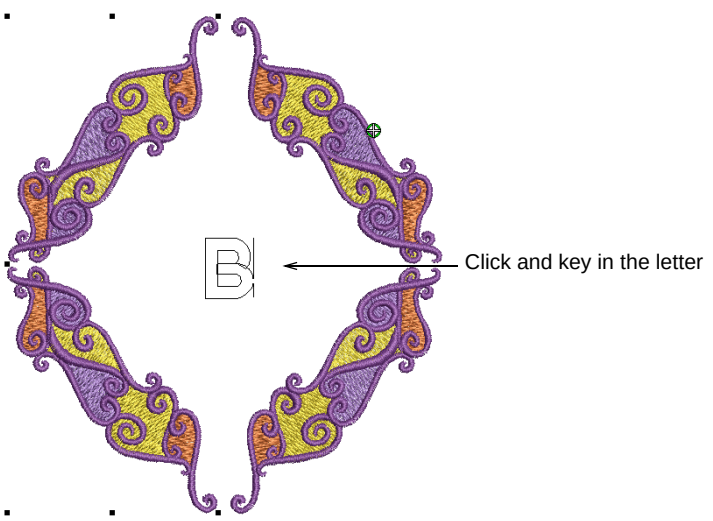
1 Click the **Lettering** icon.

2 Click the approximate center of the design.

This is where we want to place our lettering.

3 Type the letter 'B'.

An outline of the letter appears in the Design Window.



4 Press **Enter**.

Stitches are generated and selection handles appear around the letter.

Change the alphabet

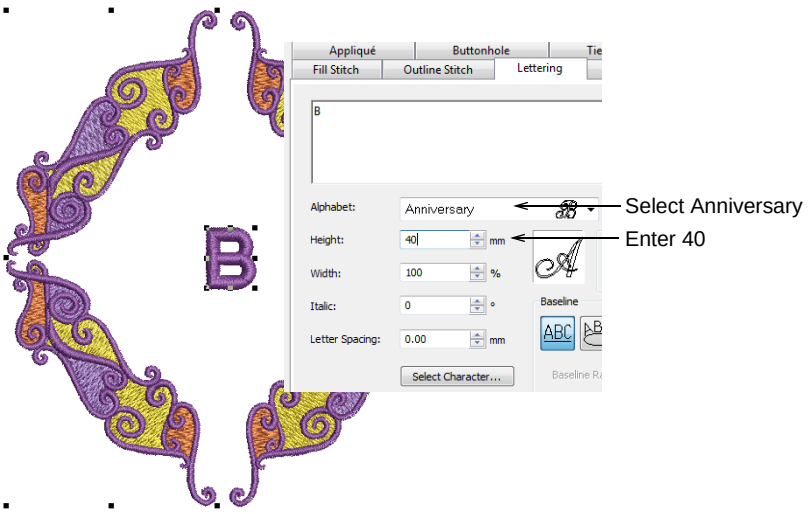
BERNINA Embroidery Software provides an alphabet range suitable for many applications. The alphabet you select depends on the context the lettering is to be used in. If you are embroidering on a lady's nightdress, for example, you might use an elegant script like **Anniversary**. See Alphabet Samples in the Onscreen Manual for details.

Note Check the Onscreen Manual for the minimum/maximum recommendations for each alphabet. Stay within those recommendations for best results.

To change the alphabet

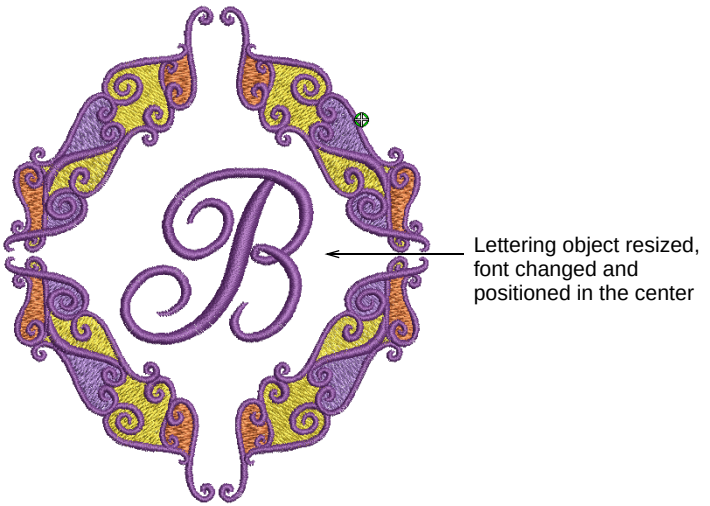
1 Double-click or right-click the lettering object.

The **Object Properties > Lettering** dialog opens.



2 Select the **Anniversary** alphabet and enter 40 mm (1.57") in the **Height** field.

3 Click **Apply** to accept the changes and click **OK** to close.



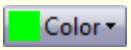
4 Click and drag the lettering object to the center of your design or use the arrow keys to 'nudge' it into position.

Setting up thread colors

At this point, we've almost finished our monogram design. But first we'll change the thread colors to something more neutral. We'll also add a color to the Color Palette.

Tip Save your design frequently so you don't lose your work in the event of a power or system failure. See also Saving designs.

Assign thread colors



Use Color (Stitch and Color Bar) to set up thread colors.

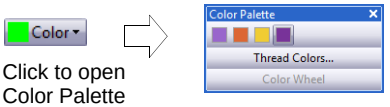
There are many thread brands and each brand has its own color chart. You can use a preset thread chart or create your own. For the exercise, we will use the **Isacord 40 wt-numerical** thread chart. See also Thread Colors and Charts in the Onscreen Manual.

Note Due to the differences in computer monitors and computer video cards, the approximate colors displayed should be used only as guides. Threads should always be matched to the appropriate physical color card.

To assign thread colors

1 Click the **Color** icon.

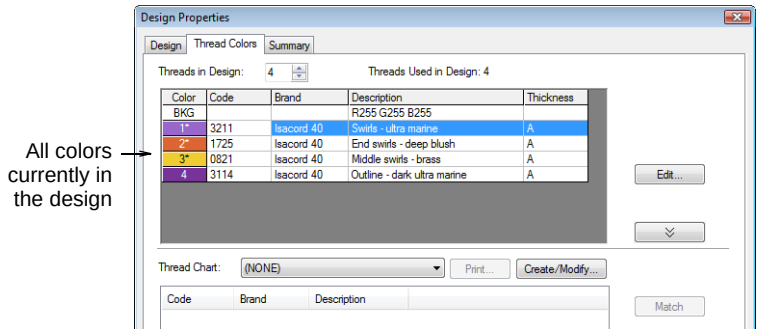
The **Color Palette** opens.



Click to open Color Palette

2 Click the **Thread Colors** link.

The **Design Properties** dialog opens with the **Thread Colors** tab active. The colors in the current design appear in the **Threads in Design** panel.

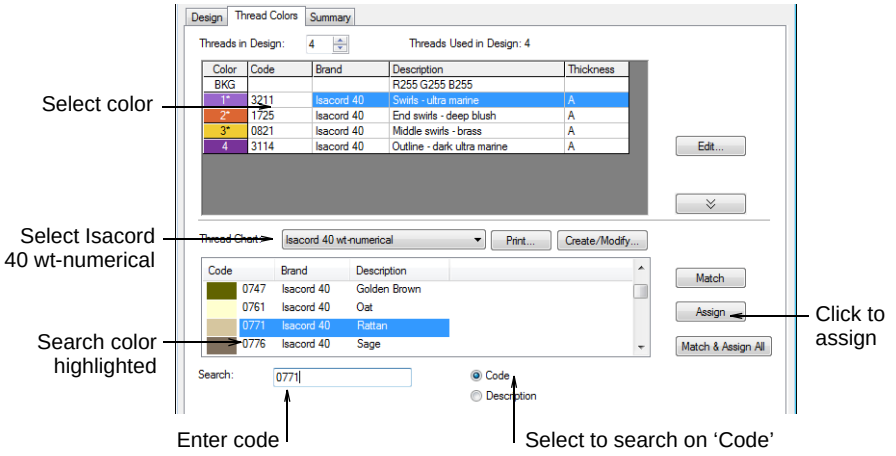


3 Select ‘Isacord 40 wt-numerical’ from the **Thread Chart** list.

4 Select the first design color in **Threads in Design** list.

5 Select the **Code** option and in the **Search** field, enter ‘0771’.

The system searches for the thread and highlights it in the list.



6 Click **Assign** or double-click the thread.

The selected color in the **Threads in Design** list is replaced by the highlighted thread color.

7 Assign the next three colors as follows:

- Color 2: **1141**
- Color 3: **1161**
- Color 4: **1252**.

8 Click **Apply** to accept the changes and click **OK** to close.

Add a color to the design

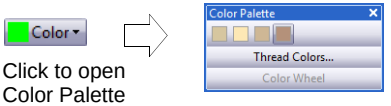
Use Color (Stitch and Color Bar) to set up thread colors.

You can add colors to thread charts using colors from other charts or colors you mix yourself. We will add another color to the Color Palette which we will apply to our lettering object. See also Creating custom thread charts in the Onscreen Manual.

To add a color to the design

1 Click the **Color** icon.

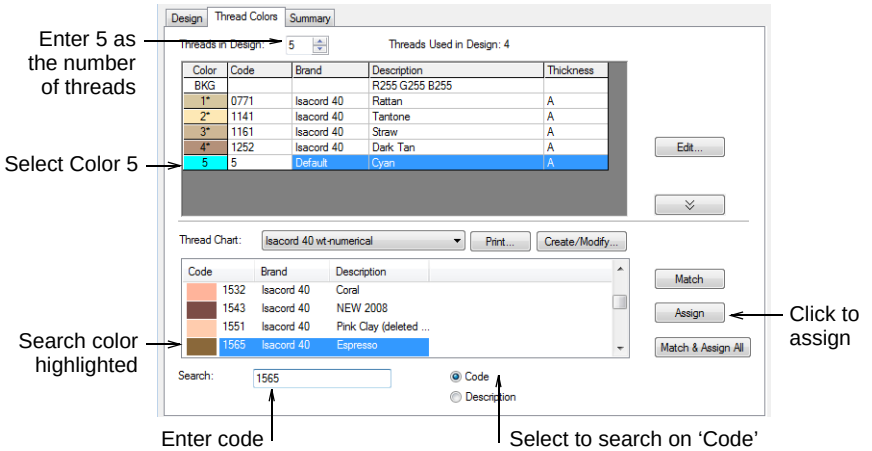
The **Color Palette** opens.



Click to open Color Palette

2 Click the **Thread Colors** link.

The **Design Properties** dialog opens with the **Thread Colors** tab active. The colors in the current design appear in the upper **Threads in Design** panel.



3 In the **Threads in Design** field, enter '5' as the number of threads to use in the design and click **Apply**.

4 Select the newly added Color 5.

5 In the **Search** field, enter '1565'.

The system searches for the thread and highlights it in the list.

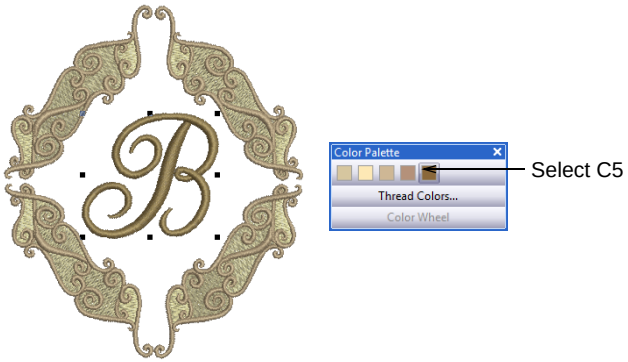
6 Click **Assign** or double-click the thread.

The selected color in the **Threads in Design** list is replaced by the highlighted thread color.

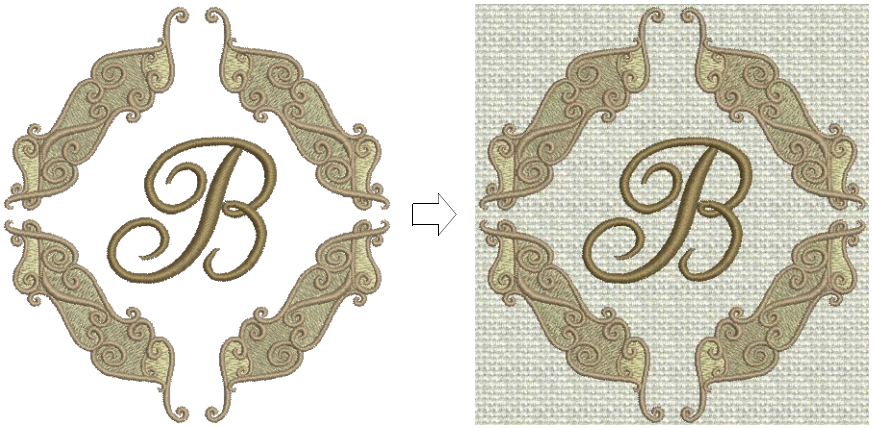
7 Click **Apply** to accept the changes and click **OK** to close.

The newly assigned color now appears in the Color Palette.

8 Select the lettering object and select C5 from the Color Palette.



Tip Use Artistic View together with a background fabric to see how your design will look when stitched out. See Changing backgrounds for details.



Finalizing the design

We're now almost ready to output our design. But first we'll carry out a final check of the design properties to get a better idea of how it will stitch out.

Tip Save your design frequently so you don't lose your work in the event of a power or system failure. See also Saving designs.

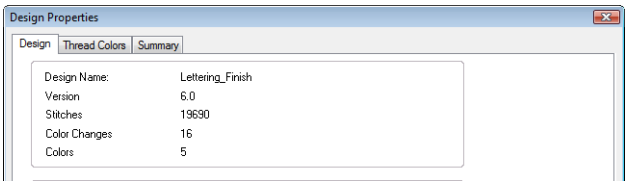
Carry out a final check

Finally we will carry out a final check to see how the design will stitch out.

To carry out a final check

1 Select **File > Design Properties**.

The **Design Properties > Design** dialog opens. The **Design** tab contains information about height and width and stitch count and colors. The data is extracted from the design and cannot be modified.



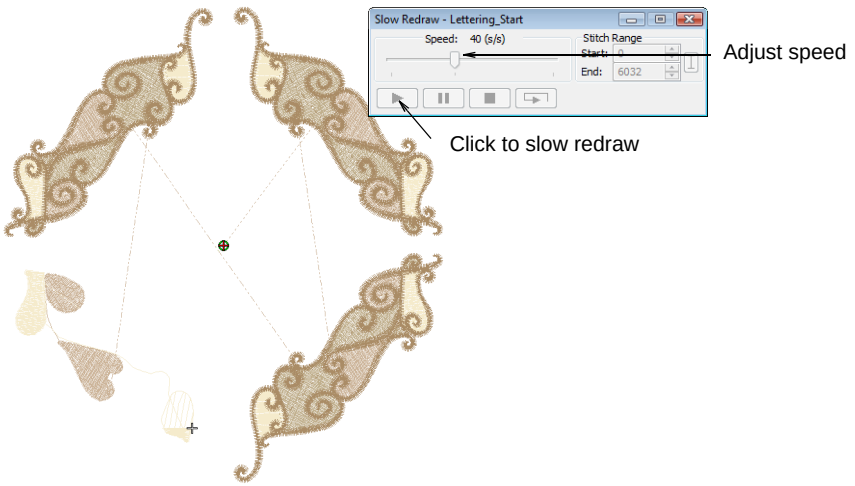
2 Observe the following details:

- Stitch count: approx. 19,600 stitches
- Color changes: 16
- Colors: 5.

Note This represents a lot of color changes for a design with only five threads. If you are using BERNINA EditorPlus or BERNINA DesignerPlus, you can resequence objects and consolidate color blocks in order to reduce the number of changes. See Optimizing thread colors in the Onscreen Manual for details.

3 In Embroidery Canvas, select **View > Slow Redraw** or press **Shift+R**.

The **Slow Redraw** dialog opens.



4 Click the **Go** button.

The design will stitch out on your machine exactly as you see it here. See Outputting Designs in the Onscreen Manual for details.

Tip The final result of this project is located in the 'Tutorials' folder. You may want to compare it at this point with your own completed design. A resequenced final design is also included in the folder.

Output the design

Use Print Preview (General toolbar) to preview a design before printing.

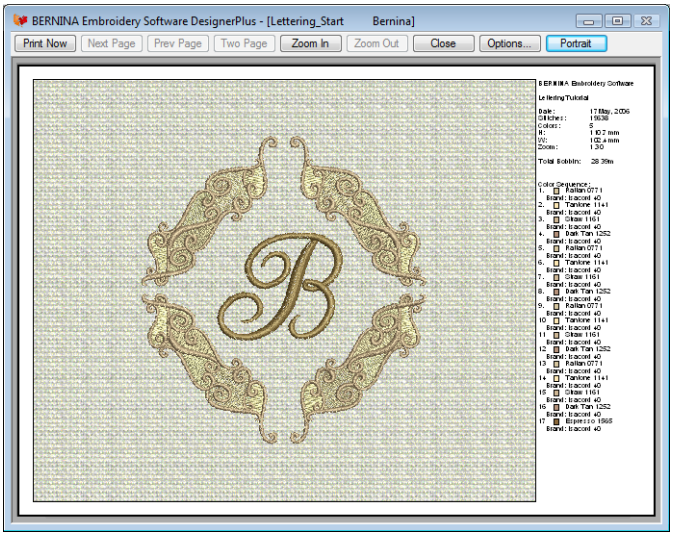
Use Write to Machine (General toolbar) to send a design directly to the BERNINA home embroidery machine ready to stitch.

We're now able to output our design. We can do that in various ways including printing or sending to machine. Use **Print Preview** to view a stitching worksheet. Check it as you need to know the sewing sequence before stitching out. You can create a hard copy of your designs using default or custom printer options. See also Outputting Designs in the Onscreen Manual.

To output the design

1 Click the **Print Preview** icon.

The design opens as it will be printed. See also Printing designs in the Onscreen Manual.



2 Change printing options by clicking the **Options** button. See Setting print options for embroidery in the Onscreen Manual for details.

Note Large designs may be displayed over a number of pages if printed at actual size. Use **Next Page**, **Previous Page** or **Two Pages** to view multiple pages.

3 Click **Close** to exit the print preview.

4 Use **Write to Machine** to send your design directly to your BERNINA® Embroidery Software home embroidery machine ready to stitch. See Stitching out designs in the Onscreen Manual for details. See also detailed instructions provided in your embroidery machine documentation.

Tip Magic Box allows you to convert between designs saved in a variety of 'non-native' formats. You can read a design from any supported design card into BERNINA Embroidery Software and edit it. Contact your dealer or OESD for information on using your specific Magic Box with BERNINA Embroidery Software. See Storing designs with Magic Box in the Onscreen Manual for details.

Where to go from here?

Modern computer-controlled machine embroidery is an exciting and challenging craft. A huge variety of high-quality designs which previously could only be achieved in industrial settings, is now achievable by the home user. BERNINA Embroidery Software can provide results which are comparable to the best in commercial embroidery.

- Make sure you read the Introduction to Embroidery Digitizing for an overview of all the capabilities of your BERNINA Embroidery Software. See Introduction to Embroidery Digitizing in the Onscreen Manual for details.
- To identify sources of information relevant to your specific model, see the BERNINA Embroidery Software Product Feature List.
- For a description of the other tutorials available to you, depending on your particular product level, see Tutorials.
- Lastly, it's a good idea also to familiarize yourself with the Quick Reference. See Quick Reference for details.

Remember, perfect results are arrived at through a combination of good design, good digitizing, and good machine practice.

CHAPTER 7
EDITING TUTORIAL

In this tutorial you will learn how to check a design and not only look for actual errors but potential errors which may affect the quality and appearance of the stitchout. You will explore methods to detect and correct errors, optimize designs and familiarize yourself with the powerful features of BERNINA Embroidery Software that enable you to accomplish these tasks. The tutorial can be completed with BERNINA EditorPlus or BERNINA DesignerPlus.

Before we begin editing, we need to know how to view the design as well as select objects within it. When we start, we will check individual objects in the design and make appropriate changes. We will then look at thread colors and stitching sequence, and explore and apply best practices to optimize designs. By the end of the tutorial you will have grasped some of the basic concepts of design editing that will allow you to create better-looking, quality designs that use your machine to the best of its capabilities.

Note All steps required to complete the project are provided here. For further information, however, you are referred to the Onscreen Manual.

Getting started

Use Art Canvas to load, edit and save pictures as a backdrop for embroidery digitizing.

Use Embroidery Canvas mode to create and edit embroidery designs. Show embroidery shapes as well as graphics. View designs realistically in Artistic View.

Use Open (General toolbar) to open an existing design.

For the purposes of this tutorial, we will take an existing design and resize it to fit a chest pocket. The original design was created for stitchout on a light fabric. We are going to change it to stitch out on denim which is a heavy woven fabric. As our starting point, we're going to use one of the sample designs packaged with the software.

Tip Your BERNINA Embroidery Software comes with a range of artwork and embroidery designs that you can use as a starting point for your own projects. In addition to the packaged sample designs, you will find a dedicated 'Tutorials' folder which contains all the files you need to complete this and other tutorials. The final result of this and other projects is also located in this folder. You may want to view the completed project file before and/or after completing the tutorial. See also Working with design files.

To get started

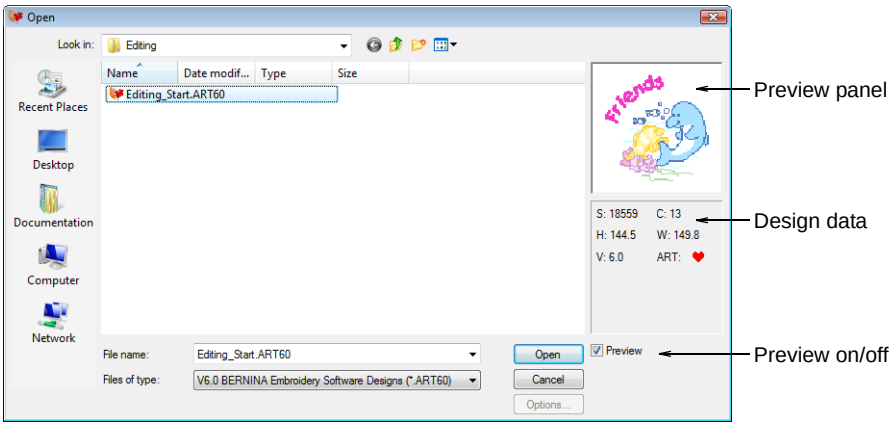
1. Double-click the BERNINA Embroidery Software shortcut icon on the MS Windows® desktop.

   BERNINA Embroidery Software opens with a new, blank design (Design1) with the default hoop selected.

2. Choose **Embroidery Canvas** mode.

3. Click the **Open** icon.

The **Open** dialog opens.

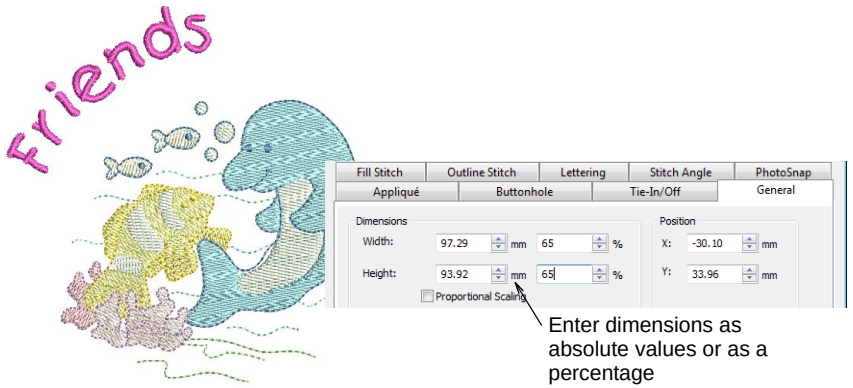


4 Navigate to the **My Designs - Embroidery Software 6** folder and select the **Tutorials > Editing** folder.

5 Select the 'Editing_Start.Art60' file and click **Open**.

The design opens in the Design Window.

6 Double-click or right-click the design to open the **Object Properties** dialog, and select the **General** tab.



Note By default, designs are automatically grouped upon opening or insertion into another design. See Setting other general options for details.

7 Enter '65' into **Width** and/or **Height** percentage fields respectively.

The actual design size is approximately 97 x 94 mm, which is the required size. See also Scaling objects using object properties in the Onscreen Manual.

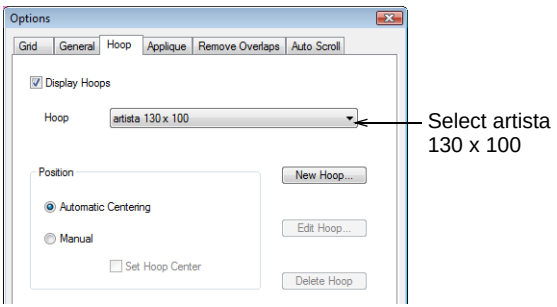
Tip Use the **Proportional Scaling** checkbox to maintain proportional scaling of original object.

8 Click **OK**.

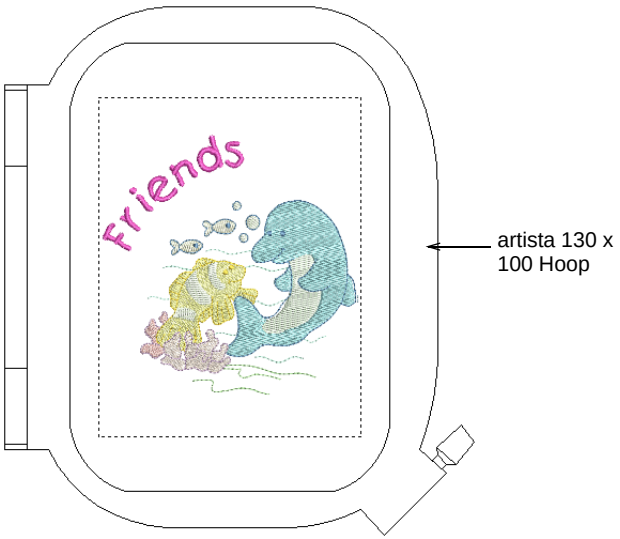
The whole design is reduced to 65% of the original size.

9 Right-click the **Show Hoop** icon.

The **Options > Hoop** dialog opens.



10 Select 'artista 130 x 100' from the **Hoop** list and click **OK**.

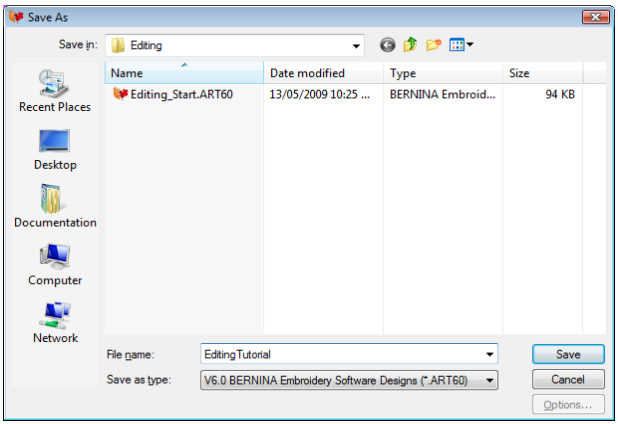


11 Zoom out to better view the hoop – select the **Zoom Box** tool and right-click the design once.

Tip Once you have selected a hoop you can toggle it on or off by clicking the **Show Hoop** icon.

12 Select **File > Save As**.

The **Save As** dialog opens.



Tip The **Save As** dialog opens to the same location where the original file is stored.

13 Enter a suitable name – 'EditingTutorial' – in the **File name** field.

14 Click **Save**.

Tip Subsequently, you only have to click the **Save** button or **Ctrl+S** to save any changes.

Inspecting the design

Click Show Artistic View (General toolbar) to toggle artistic or 'stitchout' view on/off.

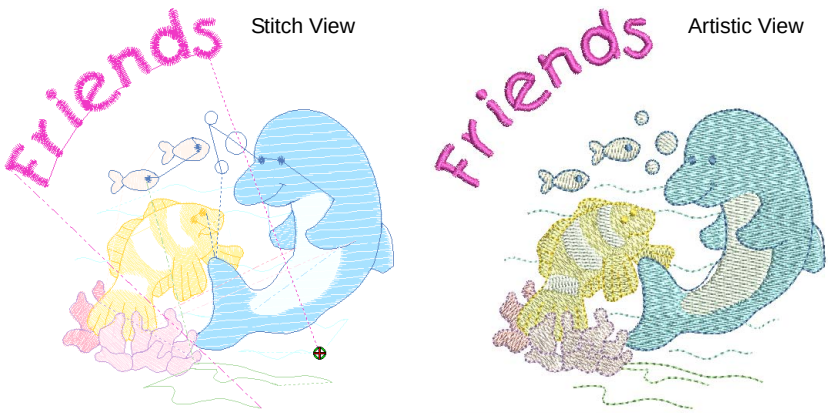
Before starting we should do a quick visual check and view the design properties. Most errors will be revealed during the course of these checks.

When we digitize or edit a design, we need to keep in mind that at the end of it all, a machine will have to carry out our instructions to sew it.

To inspect the design

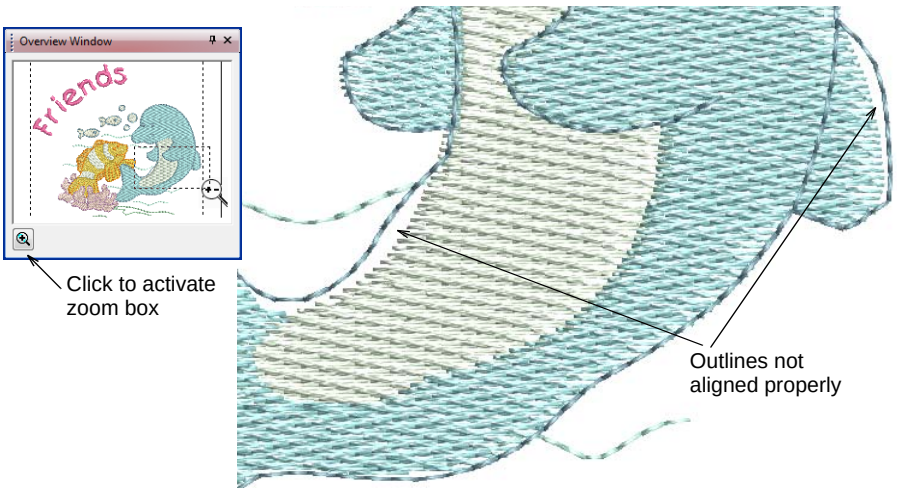
1 Click the **Show Artistic View** icon to view the design realistically in simulation.

The design appears more realistically than in Stitch View though it is generally harder to edit in this mode.



2 Magnify the dolphin, especially the belly and the back fin, by using either zooming tools or Overview Window to study the outlines more closely. See Zooming and panning for details.

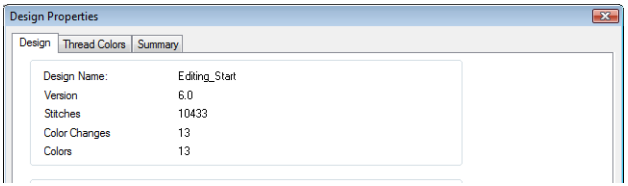
Note that the outlines do not align properly with the underlying fill stitches.



Tip The current zoom factor is shown at the lower right corner of the screen.

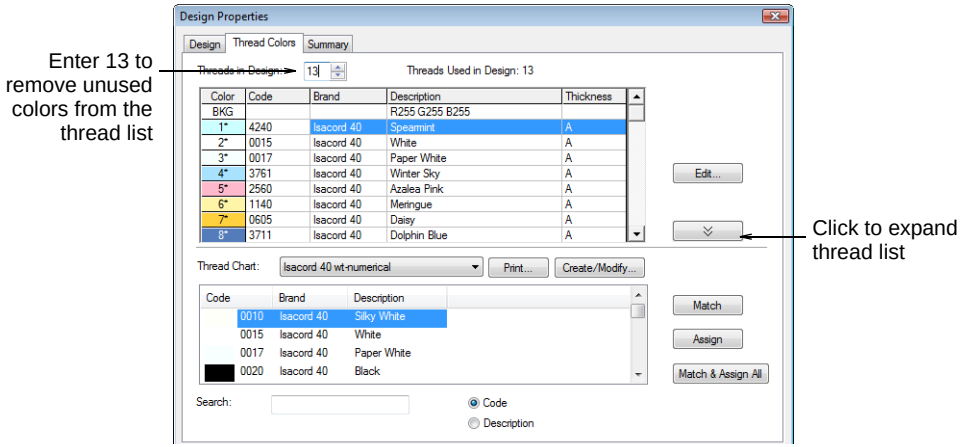
3 Select **File > Design Properties**.

The **Design Properties > Design** dialog opens. This contains design information such as height, width, stitch count and colors. This data cannot be modified.



Not only are there too many stitches in this design and the numbers of colors and color changes seem too great. We will explore ways to reduce these which should in turn improve stitchout efficiency and quality.

4 Click the **Thread Colors** tab.



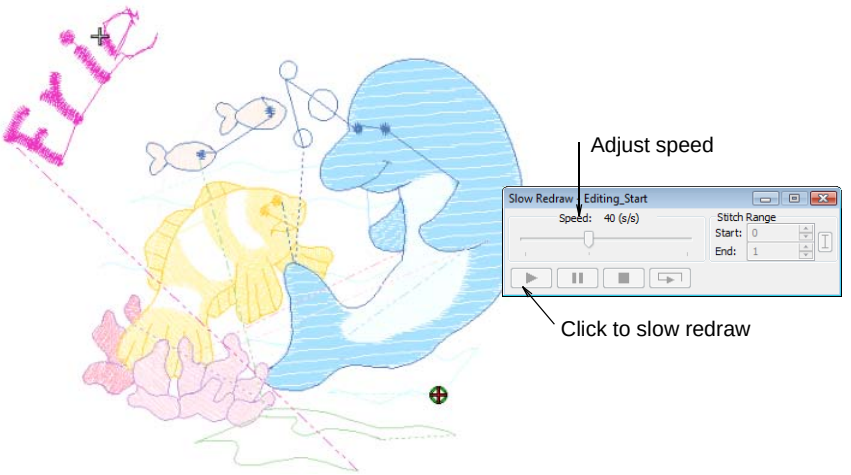
5 Enter '13' into the **Threads In Design** field to remove unused colors from the list and click **Apply**.

Unused colors are removed from the chart. Notice that some colors are very similar. There is an opportunity to see if we can apply the same color to one or more objects to lessen the total number of color changes and threads required.

6 Click **OK** to close.

7 In Stitch View, select **View > Slow Redraw** or press **Shift+R**. See Simulating design stitchouts for details.

The **Slow Redraw** dialog opens.



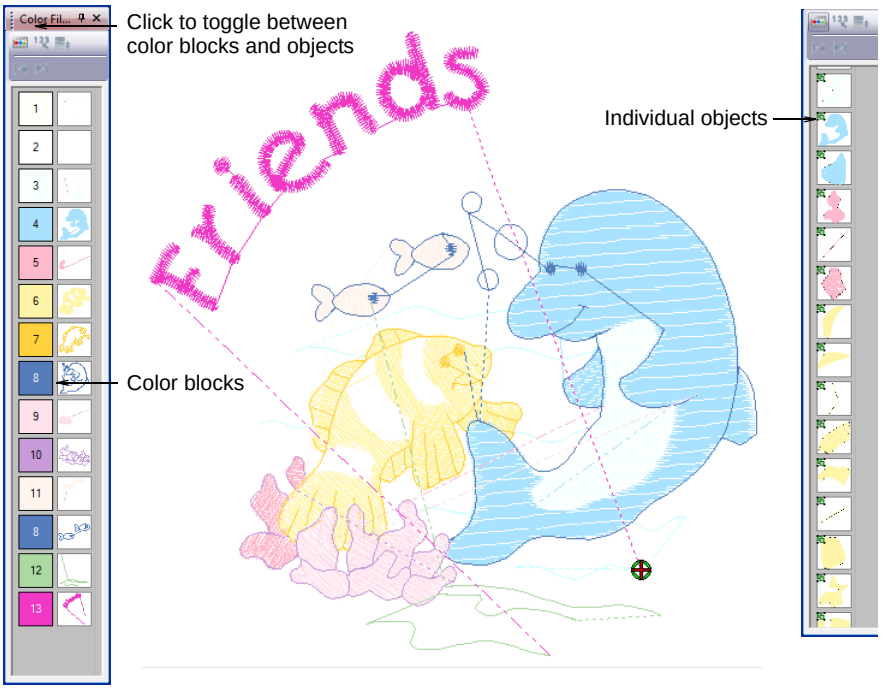
8 Use the slider bar to set the redrawing speed.

9 Click the **Play** button.

The design is redrawn onscreen according to the stitching sequence. Because **Slow Redraw** emulates the movements of the embroidery machine, you are able to make decisions about how to optimize your design to reduce the load on the machine. Note the following problems:

- Some of the dolphin's outlines do not align with the corresponding filled areas.
- The text spacing or 'kerning' needs adjustment.
- The text is too far away from the rest of the design.

10 Click the **Color Film** icon. See Viewing and selecting color blocks for details.



The **Color Film** shows the color changes in the design as well as individual objects in order of stitchout. The number of colors and color changes can be significantly reduced. For example, colors 2 and 3 are nearly the same and so are 1 and 12. If we use the same color for each pair we will reduce the number of thread colors required.

Optimizing thread colors

When checking the design properties, we noticed that our design contains a number of very similar thread colors. It is possible to limit these without compromising stitchout quality to any appreciable extent. But first we should define the fabric we want to stitch out on.

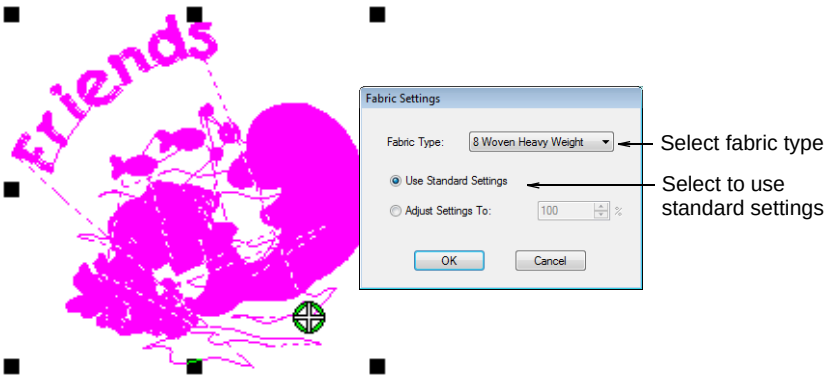
Tip Save your design frequently so you don't lose your work in the event of a power or system failure. See also Saving designs.

To optimize thread colors

1 Select the design if not already selected.

2 Select **Settings > Fabric Settings**.

The **Fabric Settings** dialog opens.



3 Select 'Woven Heavy Weight' from the **Fabric Type** list.

4 Accept the standard settings and click **OK**.

Stitch settings are adjusted according to the fabric selected. We are using denim.

5 Select the design if not already selected.

6 Click **Arrange > Ungroup** or press **Ctrl+U** to ungroup the objects.

7 Click the **Color Film** icon.

The **Color Film** toolbar opens displaying all color blocks in the design in order of stitching sequence.

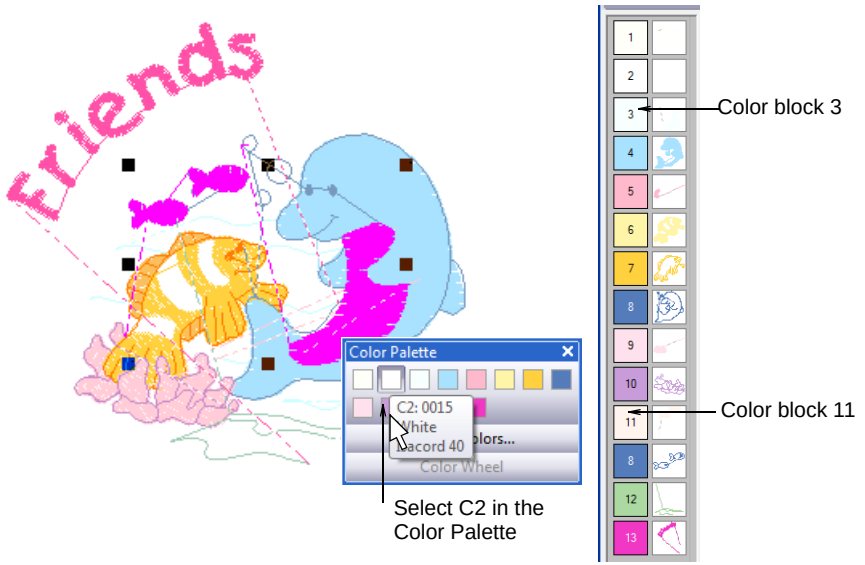
Design contains a number of similar colors

8 Select Color Block 3 from the Color Film and, holding down the **Ctrl** key, click the Color Block 11 to select both.

These are currently assigned to the dolphin belly and the fill of the small fish.

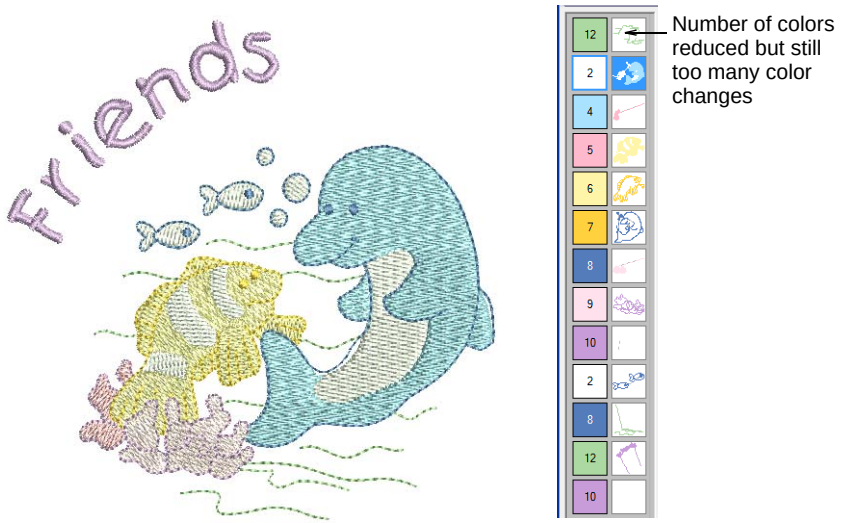
9 Click the **Color** icon in the **Stitch and Color Bar** and select C2 in the Color Palette.

Color Blocks 3 and 11 now take the same color as Color Block 2 thereby reducing the number of thread colors and color changes by 2.



10 Change the following thread colors in the same way:

- Change Color Block 13 (lettering object) to C10.
- Change Color Block 1 (lighter color wave objects) to C12.



11 Click the **Color Film** icon.

The **Color Film** toolbar opens displaying all color blocks in the design in order of stitching sequence.

12 Drag and drop the second Color Block 2 on top of the first. See Sequencing objects with Color Film in the Onscreen Manual for details.

Tip You can also use **Sequence to Start** and **Sequence to End** tools at the top of the Color Film to help you.

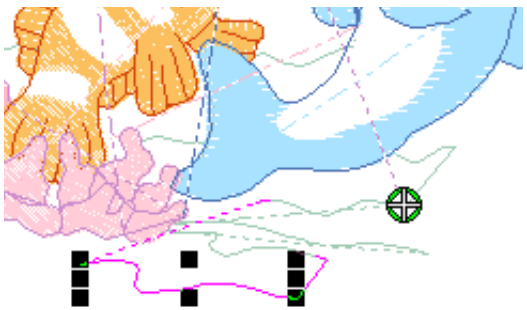
13 Repeat for Color Blocks 8, 10, and 12.

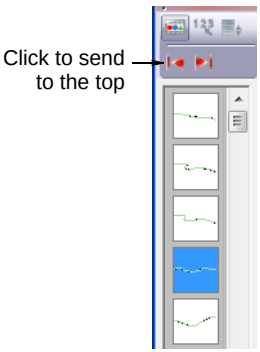
You should end up with a shorter color list as shown on the above right. The number of color changes has been reduced without compromising the quality of the stitchout.

14 Open the Color Film and click the **Show Individual Objects** icon.

The **Color Film** toolbar opens displaying individual objects in the design in order of stitching sequence.

15 Select the bottom wave either in the Design Window or in the **Color Film**.

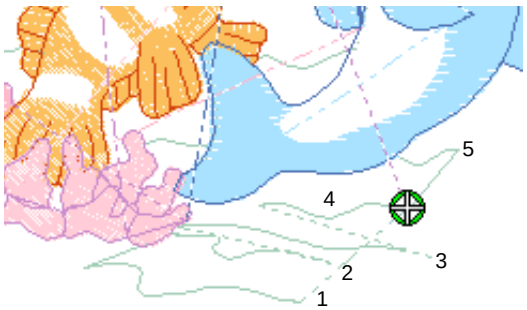




16 Click the **Sequence to Start** icon.

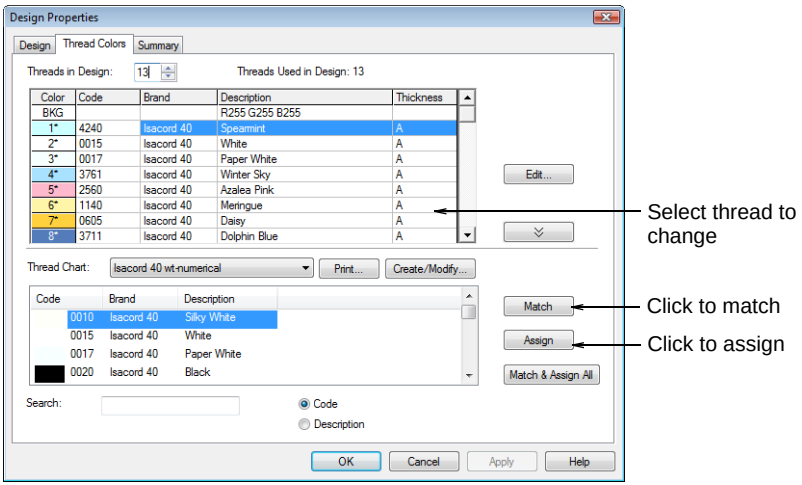
The selected wave object moves to the top.

17 Select each of the other wave objects in turn and drag them into the correct stitching order, working your way from bottom to top.



18 Select **Settings > Thread Colors**.

The **Design Properties > Thread Colors** dialog opens.



19 Select the Color 7 and click **Match** button.

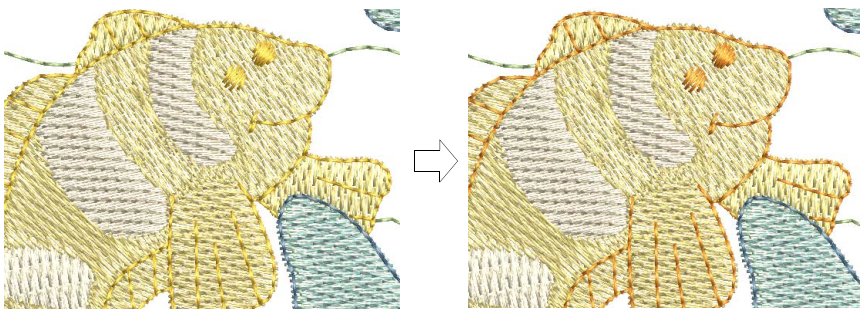
The closest available thread is highlighted at the top of the **Thread Color** list. See Matching and assigning threads in the Onscreen Manual for details.

Tip If you know the exact description or code, search and assign it. See Searching and assigning threads in the Onscreen Manual for details.

20 Select a darker thread (try Apricot) and double-click or click the **Assign** button.

The selected color in the **Threads in Design** list is replaced by the new color.

21 Click **Apply** to accept the changes and click **OK** to close.



Editing design objects

Now that we've corrected the 'gross' errors in our design, we can start to look at improving the details. Specifically, we'll change the stitch types of smaller objects to make them sew better. At the same time, we'll correct the outlines we noted at the start which do not align properly with their corresponding fills. This will improve both the appearance and efficiency of the final stitchout.

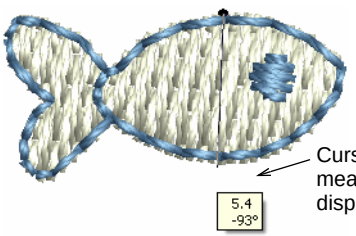
Tip Save your design frequently so you don't lose your work in the event of a power or system failure. See also Saving designs.

To edit the design objects

1 Select **View > Measure** or press **M**.

2 Measure the small fish height. See Measuring distances onscreen for details.

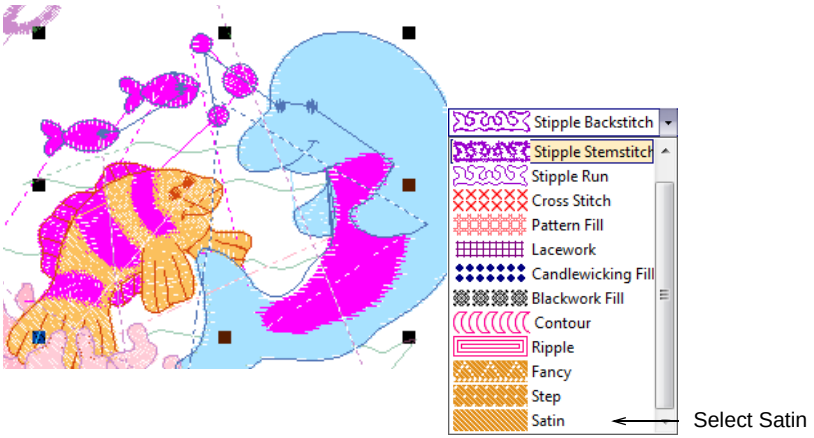
Note that the fish height is less than 6 mm, which is small enough for Satin.



3 Zoom in and select the dolphin's belly and, holding down the **Ctrl** key, select:

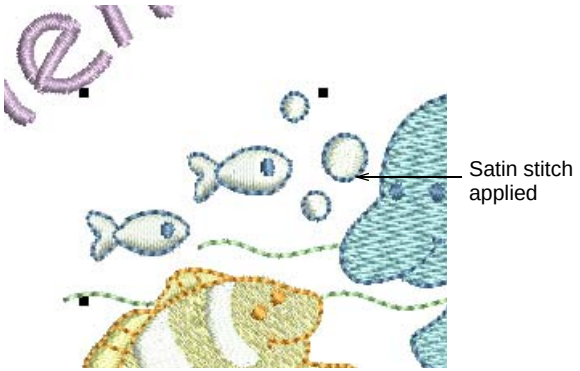
- the white stripes and fins of the larger orange fish
- the fill of the small fish, and

- the fill of the bubbles.



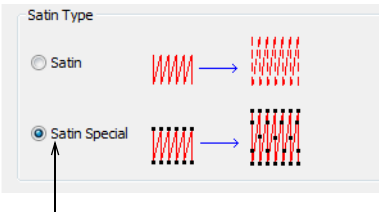
4 In the **Stitch and Color Bar**, click the **Fill** icon and select Satin from the list.

Satin stitch is applied to the selected objects using current settings.



5 Deselect the objects by pressing **Esc** key.

6 Double-click or right-click the dolphin belly to open the **Object Properties** dialog, and select the **Fill Stitch** tab.

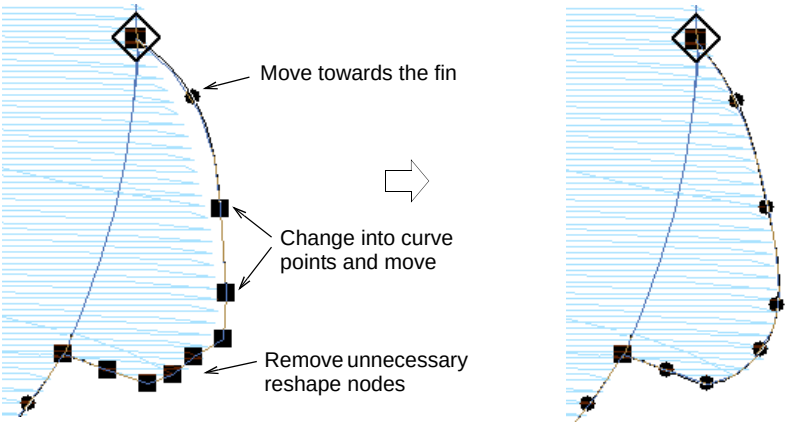


7 Select **Satin Special** in the **Satin Type** panel and click **Apply**.

While **Satin Special** is used primarily to prevent long stitches in wide shapes, it can also be used as an alternative to Step fill. **Satin Special** looks more Satin-like and works well with turning stitches, creating soft lines and a little more depth. See Splitting long stitches in Satin fills in the Onscreen Manual for details.

8 Select the outline of the dolphin's right fin and click the **Reshape Object** icon.

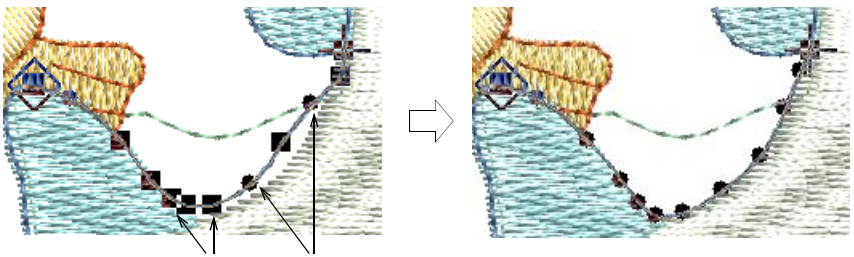
Reshape nodes appear on the outline.



9 Edit the reshape nodes by clicking and dragging, deleting, and/or changing reshape node type – e.g. corner to curve – and press **Enter** to apply changes. See Reshaping objects using reshape nodes in the Onscreen Manual for details.

Tip Drag the reshape nodes until they slightly overlap the fill where the outline is perpendicular to the fill's stitch angle – this is where the fabric tends to pull away from the outline most.

10 Switching to **Artistic View** in order to view better the white stitching, do the same for the belly outline. See Viewing modes for details.



Tip To edit the next object in a sequence press **Tab**. To edit the previous object, press **Shift+Tab**. See Reshaping next or previous objects in the Onscreen Manual for details.

Adjusting letter spacing

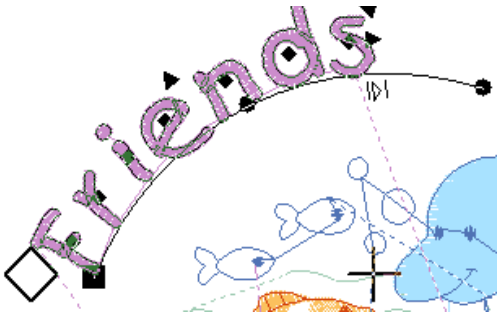
Click Reshape Object (Edit toolbar) to adjust letter spacing.

Note that the kerning of the word 'Friends' needs adjustment – the spaces between 'F' and 'R', and 'R' and 'I' are too wide. Even with automatic kerning you may find that you will need to manually modify letter spacing. See Adjusting spacings in the Onscreen Manual for details.

To adjust letter spacing

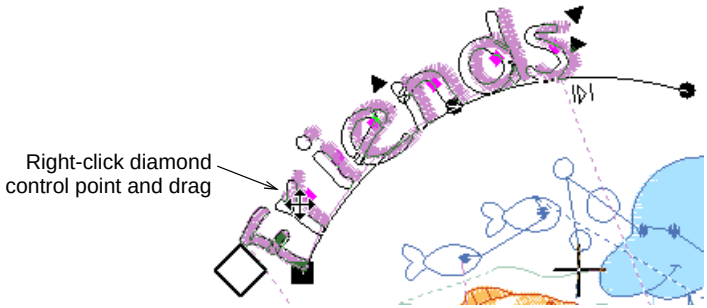
1 Select the lettering object by clicking it.

2 Click the **Reshape Object** icon.



3 Right-click the diamond control point of the letter ‘r’ and drag towards ‘F’ and release it when the spacing is narrow enough.

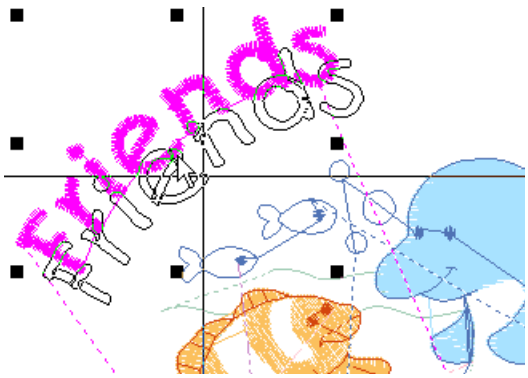
All letters to the end of the line move as one. See Adjusting individual letter spacing on-screen in the Onscreen Manual for details.



4 Do the same for the letter ‘i’.

5 Press **Esc** to exit **Reshape Object** mode.

6 Select the lettering object and drag it closer to the other objects.



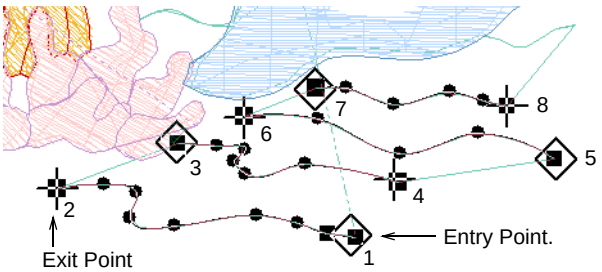
Finalizing the design

We're now almost ready to output our design but there are a few last details to attend to. First we'll check the entry and exit points of certain objects to see if they are properly aligned. We'll also carry out a final check of the design properties as we did at the very start of the process, as well as view the design against a background fabric to get a better idea of how it will look upon stitchout.

Tip Save your design frequently so you don't lose your work in the event of a power or system failure. See also Saving designs.

To finalize the design

1 Select the first (bottom-most) wave and click the **Reshape Object** icon.



2 Click and drag the entry points (diamond symbols) and exit points (cross symbols) according to the composite image shown above.

3 To jump to the next object press **Tab**. To reshape the previous object press **Shift+Tab**.

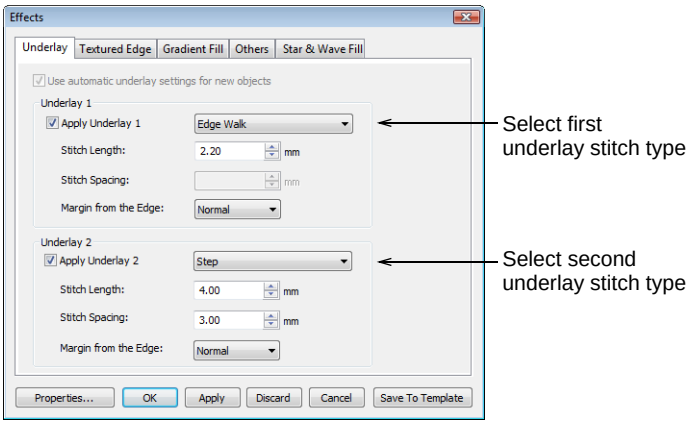
4 Press **Enter** to apply changes and press **Esc** to finish.

5 Repeat for the remaining wave objects.

Tip Use **Start and End** to position the first and last stitches of the entire design. This makes it easy to position the needle before stitching, and reduces the chance of the needle hitting the side of the hoop. See Setting automatic start and end points in the Onscreen Manual for details.

6 Right-click the **Auto Underlay** icon.

The **Effects > Underlay** dialog opens.



Note The type of underlay you choose is determined by the purpose it is to serve. Not all underlay types are applicable to all selected objects. The default value for Stitch Spacing is 3.00 mm.

7 Select the dolphin's body.

8 Select the **Apply Underlay 1** checkbox and select **Edge Walk** underlay from the list.

When you select the **Apply Underlay 1** option, the **Apply Underlay 2** checkbox becomes active. All underlay types available for Underlay 1 are also available for Underlay 2.

9 Select the **Apply Underlay 2** checkbox and select **Step** underlay from the list.

10 Accept the default **Stitch Spacing**.

11 Click **Apply** to accept the changes.

12 Repeat for the other objects in the design according to the settings shown in the table:

Object	Underlay 1	Underlay 2	Stitch Spacing
Dolphin Belly	Edge Walk	Step	3 mm
Dolphin Rt Fin	Edge Walk	Step	4 mm
Foreground Coral	Edge Walk	Step	4 mm
Large Rear Coral	Edge Walk	Step	4 mm
Small Rear Coral	Edge Walk	None	n/a

Object	Underlay 1	Underlay 2	Stitch Spacing
Fish Body	Edge Walk	Step	4 mm
Fish Forefins	Edge Walk	Step	4 mm
White Satin Fish Stripes	Edge Walk	Zigzag †	default
Satin Dorsal and Ventral Fins of Fish	Edge Walk	None	n/a
Tiny Fish and Bubbles	Edge Walk	None	n/a
Lettering	Zigzag	None	n/a
† Using a zigzag rather than a step underlay will result in greater 'loft'.			

13 Select **File > Design Properties**.

The **Design Properties > Design** dialog opens. This contains information about height and width and stitch count and colors. This data cannot be modified.

14 Observe the following details:

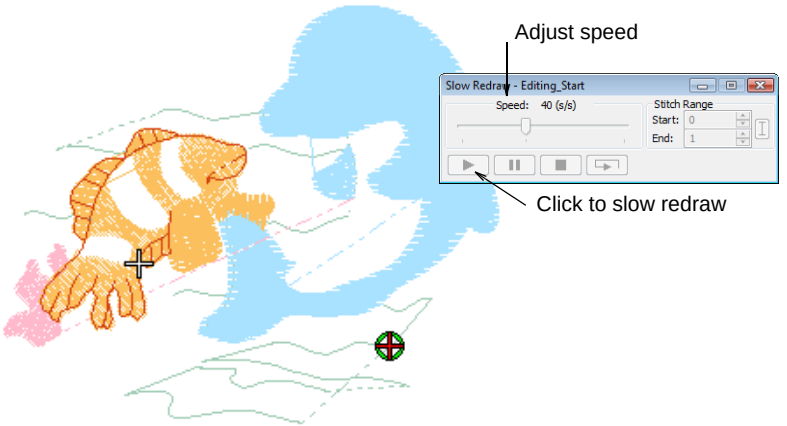
- Stitch count: approx. 11,100 stitches.
- Color changes: 8 changes. (The original contained 13 color changes.)
- Colors: 9 colors. (The original contained 13 colors.)

Note These reduced numbers will greatly improve the efficiency and quality of the stitchout.

15 Click **OK** to close the dialog.

16 Finally, select **View > Slow Redraw** or press **Shift+R** in Stitch View.

The **Slow Redraw** dialog opens.



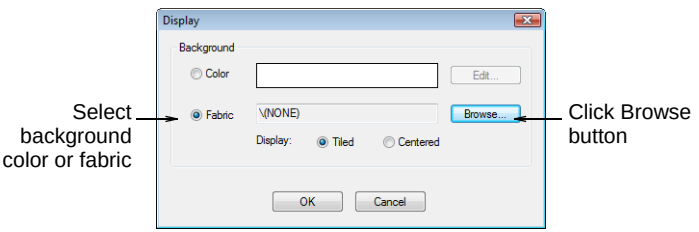
17 Click the **Go** button.

The design will stitch out on your machine exactly as you see it here. See Stitching out designs in the Onscreen Manual for details.

Tip The final result of this project is located in the 'Tutorials' folder. You may want to compare it at this point with your own completed design.

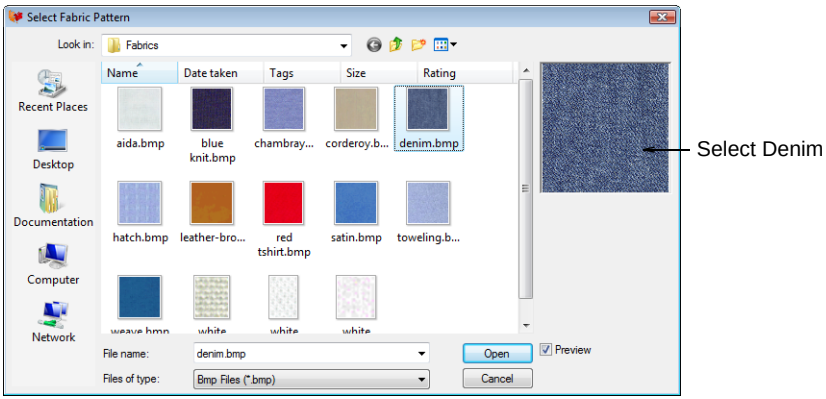
18 Select **Settings > Fabric Display**.

The **Fabric Display** dialog opens.



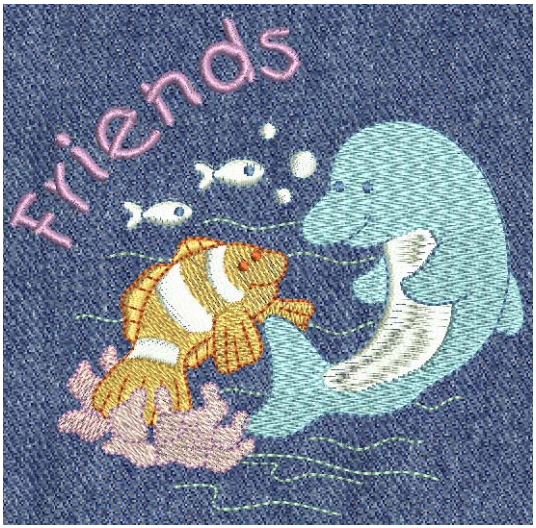
19 Select the **Fabric** button and click **Browse**.

The **Load Picture** dialog opens. Fabrics are all located in the ...\Program Files\BERNINA\Embroidery Software 6\Fabrics folder.



20 Select 'Denim' from the fabrics folder and click **Open**.

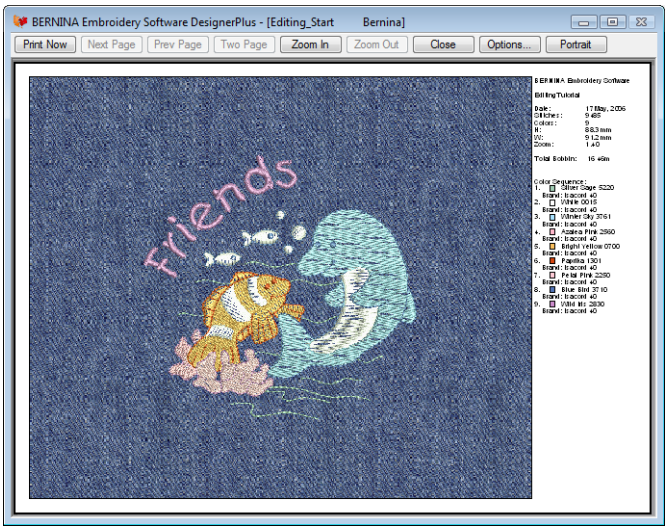
21 Click **OK** to close the **Fabric Display** dialog and apply the background.



22 Save your design. See also Saving designs.

23 Click the **Print Preview** icon.

The design opens as it will be printed. See also Printing designs in the Onscreen Manual.



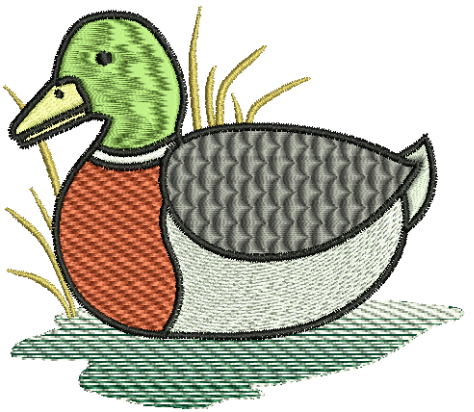
24 Change printing options by clicking the **Options** button. See Setting print options for embroidery in the Onscreen Manual for details.

Note Large designs may be displayed over a number of pages if printed at actual size. Use **Next Page**, **Previous Page** or **Two Pages** to view multiple pages.

25 Click **Close** to exit the print preview.

26 Use **Write to Machine** to send your design directly to your BERNINA® Embroidery Software home embroidery machine ready to stitch. See Stitching out designs in the Onscreen Manual for details. See also detailed instructions provided in your embroidery machine documentation.

CHAPTER 8
AUTO-DIGITIZING TUTORIAL



BERNINA® Embroidery Software Auto Digitizer allows you to create embroidery quickly and easily from different forms of artwork. Scanned images, clipart, vector artwork, bitmap images can all be used. Auto Digitizer recognizes shapes in artwork and makes decisions about the most suitable stitch types to use. It also determines the stitching sequence based on closest join.

In this tutorial you will not only learn how to automatically digitize a design but also how to enhance the embroidery automatically created. You will also check and adjust the stitching sequence to optimize the design for stitchout. The tutorial can be completed with BERNINA EditorPlus or BERNINA DesignerPlus.

Note All steps required to complete the quick-start project are provided here. For further information, however, you are referred to the Onscreen Manual.

Getting started

Use Art Canvas to load, edit and save pictures as a backdrop for embroidery digitizing.

Use Embroidery Canvas mode to create and edit embroidery designs. Show embroidery shapes as well as graphics. View designs realistically in Artistic View.

Use Load Picture (Image toolbar) to load an image for use as a digitizing backdrop.

For the purposes of this tutorial, the design is intended for an apron pocket approximately 120 mm x 120 mm (4.72"). It is to be stitched on a medium-weight polycotton. When we insert the artwork, we'll resize it to fit the pocket, making sure we have at least a 10 mm (0.39") margin on each side. We'll then choose a suitable hoop to hold the design. As our starting point, we're going to use one of the sample designs packaged with the software.

Tip Your BERNINA Embroidery Software comes with a range of artwork and embroidery designs that you can use as a starting point for your own projects. In addition to the packaged sample designs, you will find a dedicated 'Tutorials' folder which contains all the files you need to complete this and other tutorials. The final result of this and other projects is also located in this folder. You may want to view the final project file before and/or after completing the tutorial yourself. See also Working with design files.

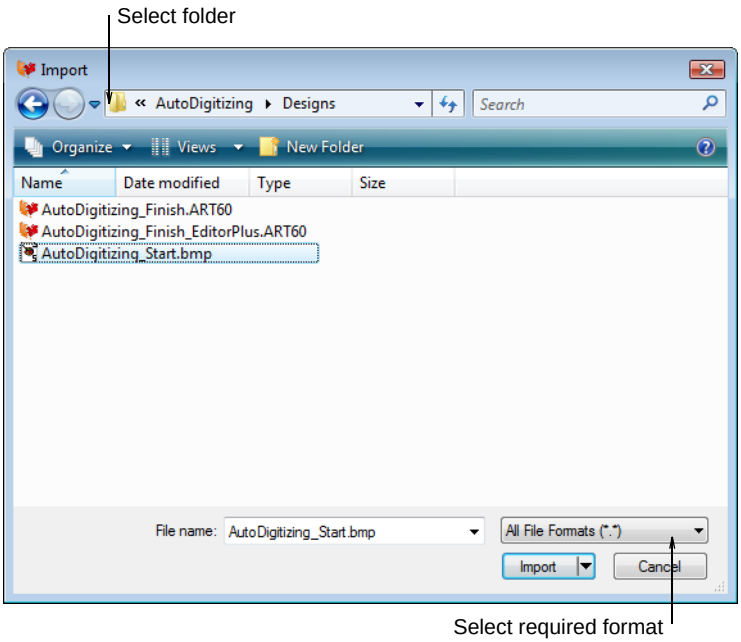
To get started

1 Double-click the BERNINA Embroidery Software shortcut icon on the MS Windows® desktop.

BERNINA Embroidery Software opens with a new, blank design (Design1) with the default hoop selected.

2 Switch to **Art Canvas** mode and click the **Load Picture** icon.

The **Import** dialog opens.

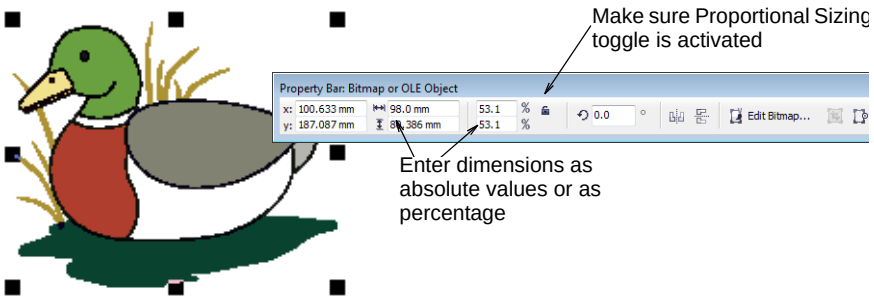


3 Navigate to the **My Designs - Embroidery Software 6** folder and select the **Tutorials > AutoDigitizing** folder.

4 Select the 'AutoDigitizing_Start.BMP' file and click **Import**.

5 Press **Enter** to center the imported artwork on the page.

The picture opens in the Design Window.



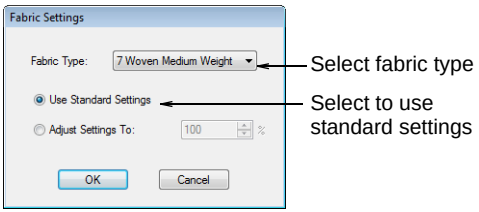
6 Ensuring that the **Proportional Sizing** toggle is activated, in the **Width** (X) field of the **Property Bar**, enter a value of 98 mm (3.86") and press **Enter**.

The width should now be 98 mm (3.86") and the height 80.4 mm (3.18").

7 Switch to **Embroidery Canvas** and press **Esc** to deselect artwork.

8 Select **Settings > Fabric Settings**.

The **Fabric Settings** dialog opens.



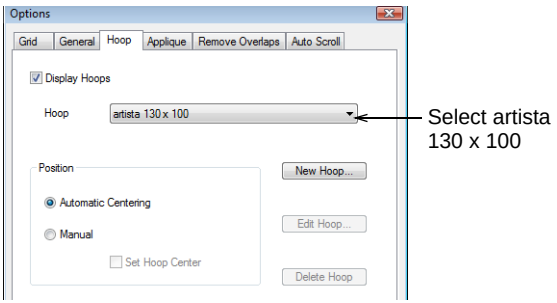
9 In the **Fabric Type** dropdown list, select 'Woven Medium Weight'.

10 Accept the standard settings and click **OK**.

These fabric settings will be applied to all newly created objects in the design.

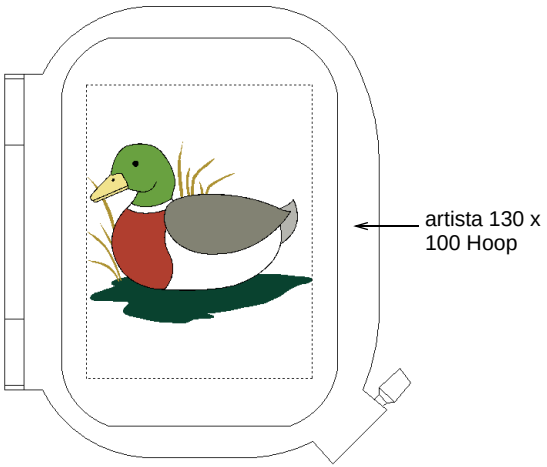
11 Right-click the **Show Hoop** icon.

The **Options > Hoop** dialog opens.



12 Select 'artista 130 x 100' from the **Hoop** list.

13 Click **OK**.

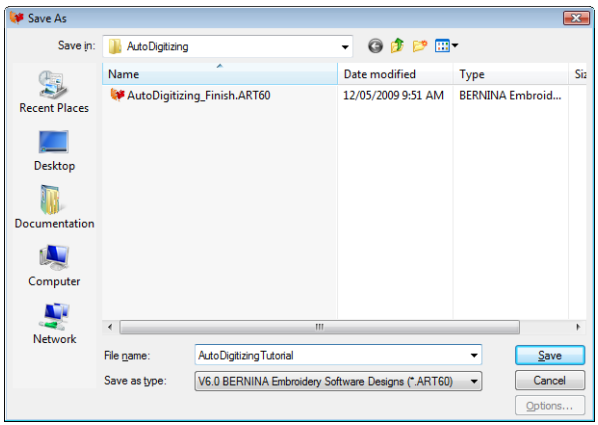


14 Zoom out to better view the hoop – select the **Zoom Box** tool and right-click the design once.

Tip Once you have selected a hoop you can toggle it on or off by clicking the **Show Hoop** icon.

15 Select **File > Save As**.

The **Save As** dialog opens.



Tip The **Save As** dialog opens to the same location where the original file is stored.

16 Enter a suitable name – 'AutoDigitizingTutorial' – in the **File Name** field.

17 Click **Save**.

Tip Subsequently, you only have to click the **Save** button or **Ctrl+S** to save any changes.

Processing the design

Use Image Preparation (Edit toolbar) to sharpen outlines and reduce noise in outlined images.

Use Auto Digitizer (Digitize toolbar) to create embroidery designs directly from imported images.

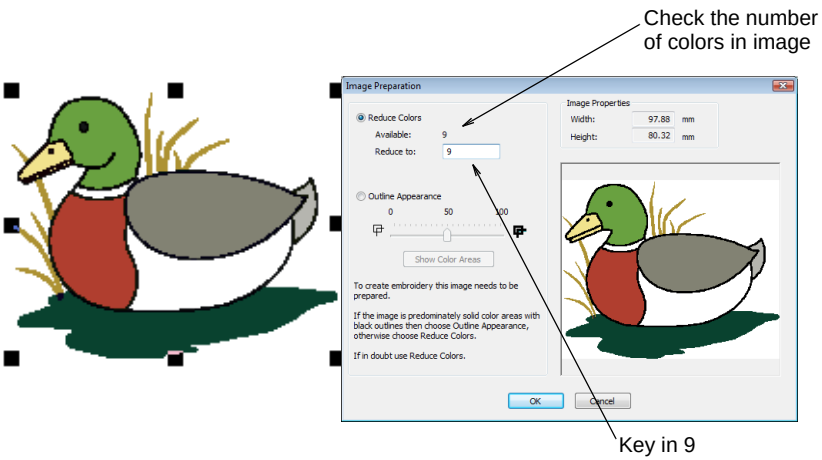
Now that we've sized the artwork and selected a suitable hoop, we can auto-digitize the design. First, however, we need to prepare the artwork for automatic digitizing.

To process the design

1 In **Embroidery Canvas** mode, select the image.

2 Click the **Image Preparation** icon.

The **Image Preparation** dialog opens with the image in the preview panel.



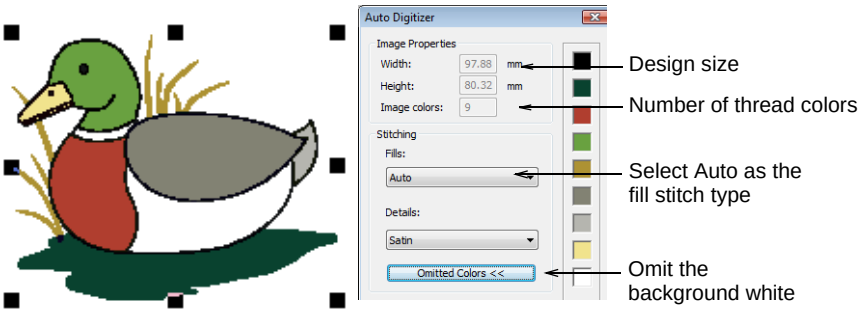
3 Note that there are 9 available colors in the image which the software wants to reduce to 6. Since we do not actually want to reduce the number of colors in this artwork, key '9' into the **Reduce to** field.

4 Click **OK**.

The image is ready for automatic digitizing.

5 Click the **Auto Digitizer** icon and click the image as prompted.

The **Auto Digitizer** dialog opens. Image information is given in the top panel, including width and height values as well as the number of image colors.



6 In the **Fills** dropdown list, select **Auto**.

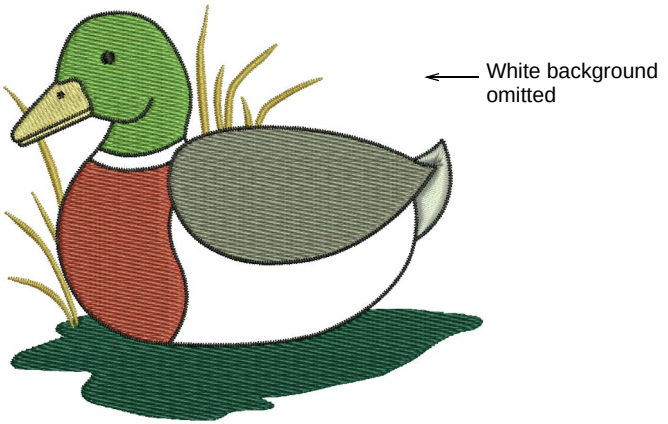
This means that the software will automatically decide which stitch types to use for fills. These can be edited after processing.

7 Click the **Omitted Colors** button.

The image colors are displayed in the dialog. You can choose to omit selected colors from the operation.

8 Select the white color block to omit and click **OK**.

Auto Digitizer converts the artwork to embroidery objects and generates stitches. The software attempts to match colors from the current (default) palette. We will change this in a subsequent step.



Fixing the design

Click Show Artistic View (General toolbar) to toggle artistic or 'stitchout' view on/off.

Use Show Pictures (General toolbar) to toggle backdrops on/off.

Click Color Film (General toolbar) to view all color blocks and objects in a design.

Use Magic Wand (Digitize toolbar) to digitize filled shapes in your artwork.

All embroidery objects in the design, except for the neck ring and body, have been automatically generated. We will now edit the design to improve its appearance and stitchout efficiency.

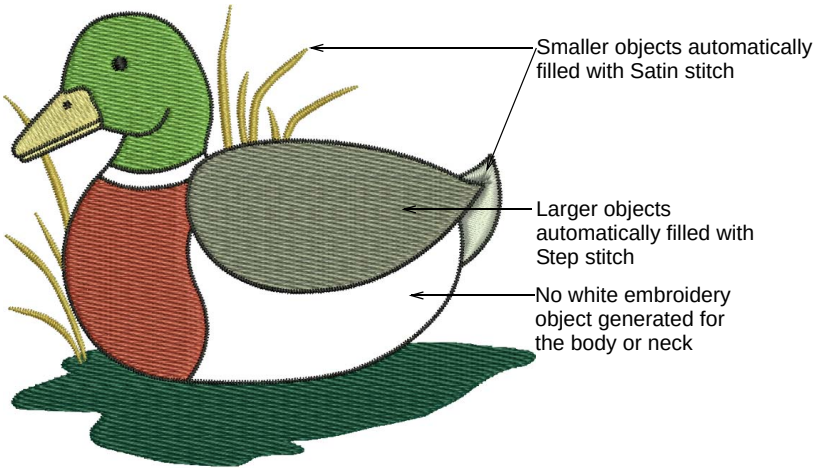
Tip Save your design frequently so you don't lose your work in the event of a power or system failure. See also Saving designs.

To fix the design

1 Activate **Artistic View** to check the design.

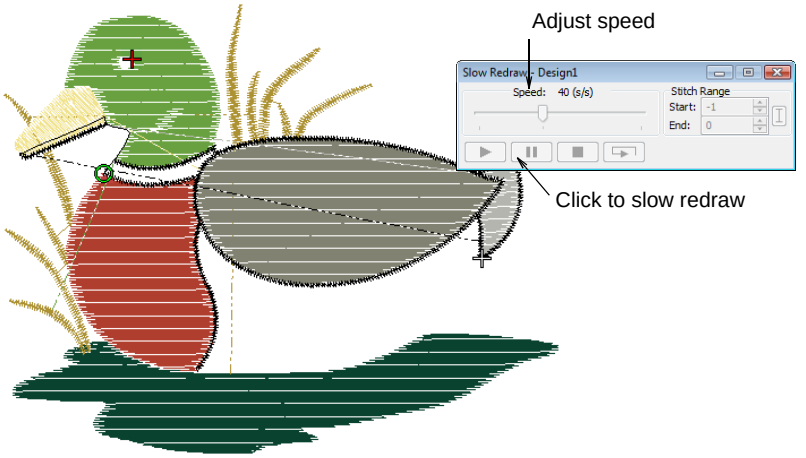
2 Press **O** (zero) on the keyboard to view the design full-screen.

3 Click the **Show Pictures** icon to hide the artwork backdrop to clearly see the generated stitches.


Smaller objects automatically filled with Satin stitch
Larger objects automatically filled with Step stitch
No white embroidery object generated for the body or neck

Note Because we omitted the white background from the auto-digitizing operation, no embroidery objects have been generated for the body or neck. We will use the **Magic Wand** to create them.

4 Press **Shift-R** to invoke **Slow Redraw** and click the **Go** button to view the stitchout simulation. See Simulating design stitchouts for details.

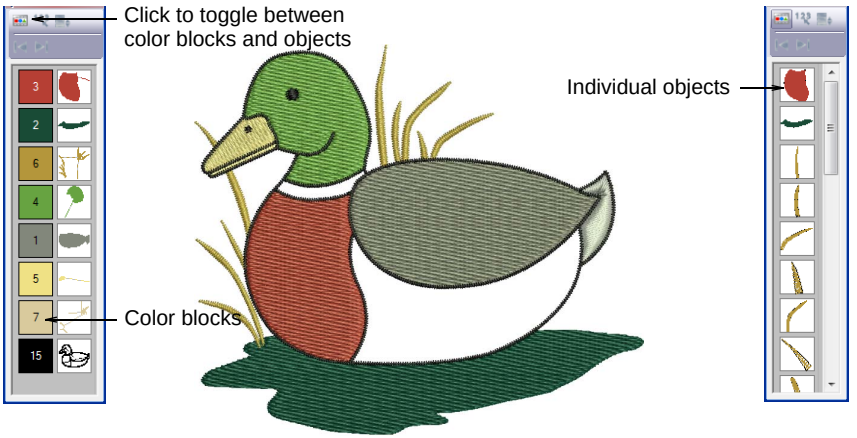


Although all the embroidery objects are fully formed, there are improvements that can be made to the stitching sequence. Similarly colored objects should be stitched out at the same time to minimize

thread changes. Adjacent objects should be stitched out in succession to minimize travels, tie-ins and tie-offs.

5 Click the **Color Film** icon.

The **Color Film** toolbar opens displaying all color blocks in the design in order of stitching sequence. See Viewing and selecting color blocks for details.

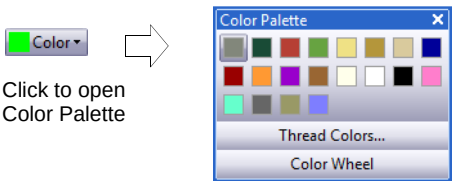


Note The stitching sequence proceeds from top to bottom. It is good practice to visually check the Color Film for potential problems like two blocks of the same color unnecessarily separated. This would mean that you will need to change threads twice while you are stitching out your design.

6 Click the **Show Individual Objects** icon and check the objects one-by-one from top-to-bottom.

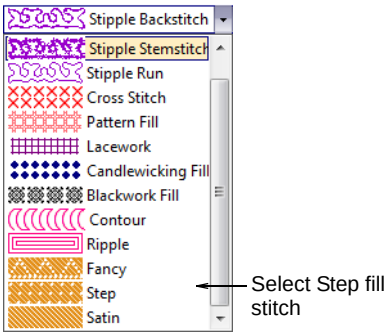
Notice that the object you click in the Color Film is simultaneously selected in the design. As you click your way down the list, check whether the current object is adjacent or near to the previous object.

7 Press **Esc** to ensure no objects are selected.



8 Click the **Color** icon on the **Stitch and Color Bar** and select the white thread color from the **Color Palette**. See Changing thread colors in the Onscreen Manual for details.

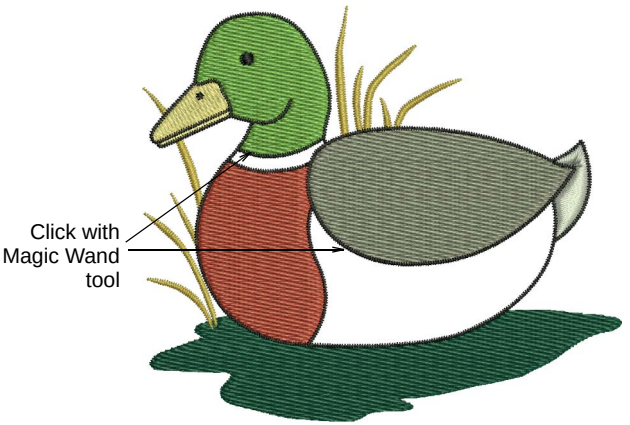
9 Click the **Fill** icon and select **Step** from the fill stitch type list. See Selecting or changing stitches in the Onscreen Manual for details.



Note If the **Magic Wand** tool is not activated, make sure **Show Pictures** icon is toggled on.

10 Select the **Magic Wand** tool, click the body of the duck, and press **Enter**. See also Digitizing with Magic Wand in the Onscreen Manual.

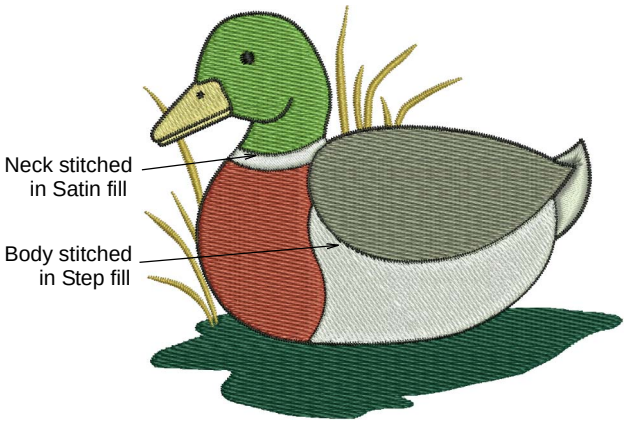
The shape is filled with Step stitches with the current stitch settings.



11 Now select **Satin** from the fill stitch type list, click the duck's neck and press **Enter**.

The shape is filled with Satin stitches with the current stitch settings.

12 Press **0** (zero) on the keyboard to view the entire design and check your work in **Artistic View**.



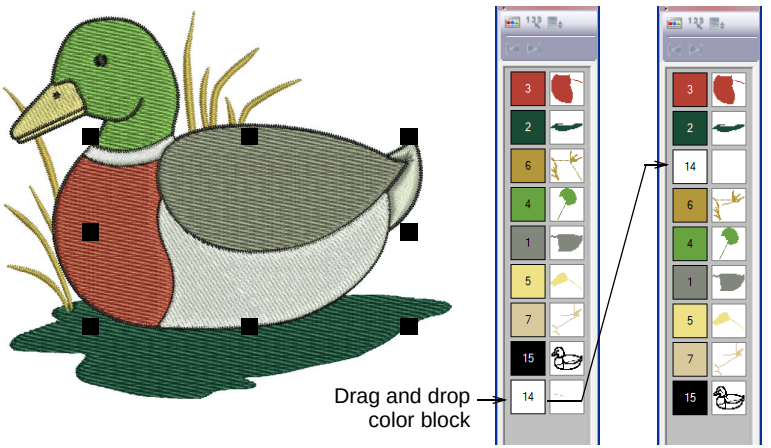
Note The neck is now circled with a white, glossy Satin stitch and the body is filled with Step fill. We will improve the appearance of this fill by contouring it to the body shape.

13 Click the **Color Film** icon.

The **Color Film** dialog opens displaying all color blocks in the design in order of stitching sequence. See Viewing and selecting color blocks for details.

14 Drag and drop the Color Block #14 (white) below the Color Block #2 in the Color Film.

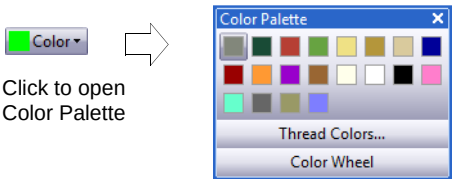
This means that the neck and body will now be stitched before the wing and tail and will lie beneath the outline.



Note The Color Film is synchronized with the Design Window and vice versa. It dynamically updates whenever you select, modify or delete objects, or create new ones.

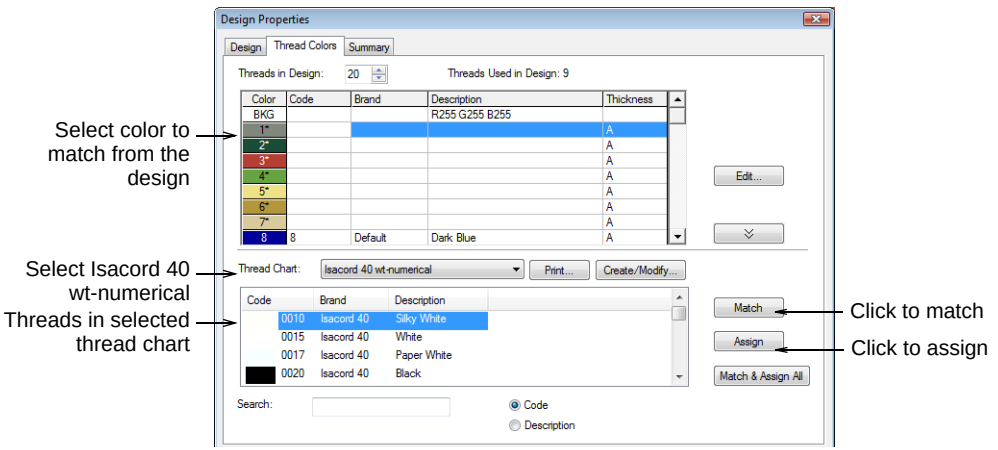
15 Click the **Color** icon.

The **Color Palette** opens.



16 Click the **Thread Colors** link.

The **Design Properties** dialog opens with the **Thread Colors** tab active. The colors in the current design appear in the **Threads in Design** panel. See Assigning thread colors in the Onscreen Manual for details.



17 Select the first design color in **Threads in Design** list.

18 Select 'Isacord 40 wt-numerical' from the **Thread Chart** list.

All the threads in the selected chart are displayed and the **Match** button is enabled.

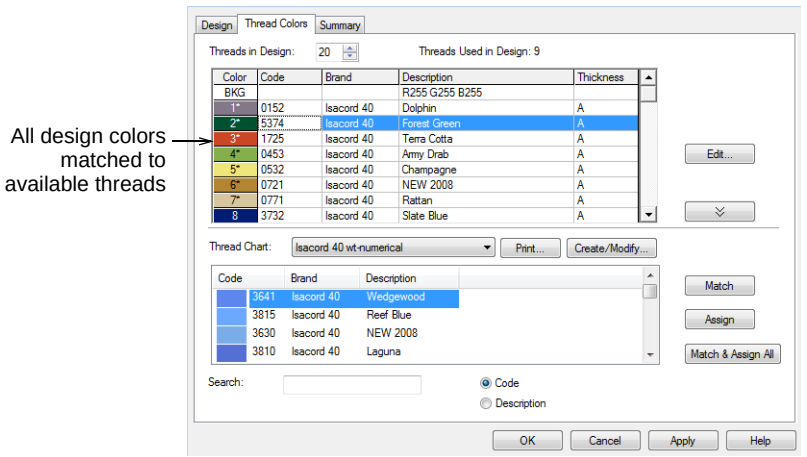
19 Click **Match**.

The closest available thread is highlighted at the top of the **Thread Color** list.

20 Click the **Assign** button or double-click the thread.

The selected color in the **Threads in Design** list is replaced by the closest matching thread.

21 Repeat until all colors in the design have been assigned.



Tip Alternatively, simply click the **Match & Assign All** button. The closest matching thread in the selected thread chart is found for each color and replaced automatically.

22 Click **Apply** to accept the changes and click **OK** to close.

Tip If, after applying the selected colors, you decide you don't like the effect, select a color of your choice and reassign it.

23 Press **Esc** to deselect all objects.

Editing stitch settings

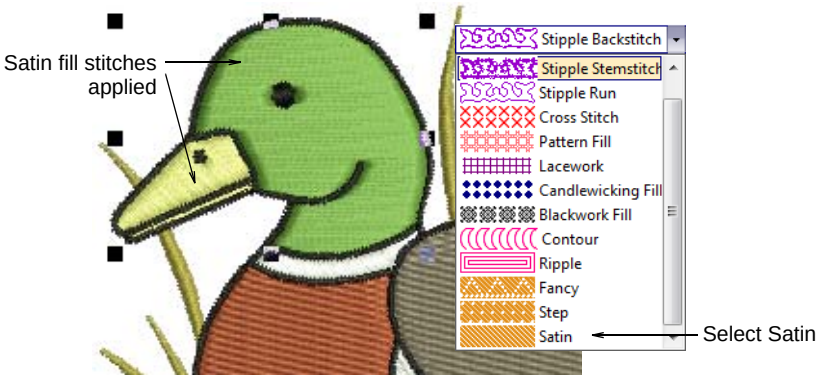
Use Color Blending (Edit toolbar) to create shading and perspective effects.

The default stitch types look rather plain. We can improve their appearance by applying any one of a range of fancy stitch types and effects.

To edit stitch settings

1 Select the duck's top beak and the head, and select **Satin** from the fill stitch dropdown list.

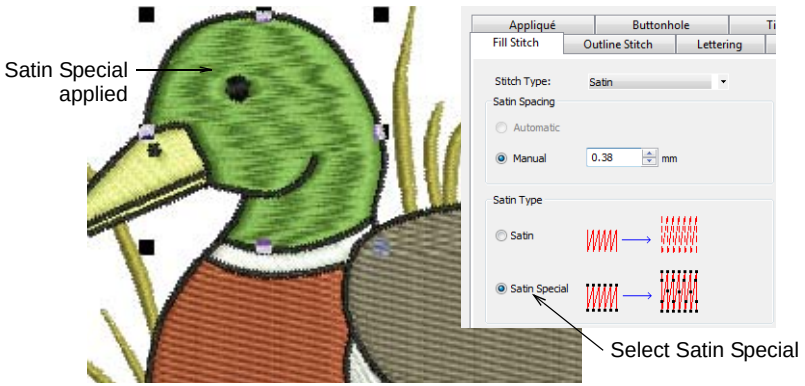
Satin fill stitches are applied to the head and beak objects with current settings.



Note Notice the change to both head and beak – instead of a flat Step stitch pattern, they now take on a sleeker, glossier appearance. However, the head is quite large and Satin stitches may be too loose on stitchout. We can solve this problem by applying **Satin Special** stitch which splits long stitches into shorter segments. See also Splitting long stitches in Satin fills in the Onscreen Manual.

2 Press **Esc** or click away to deselect all objects.

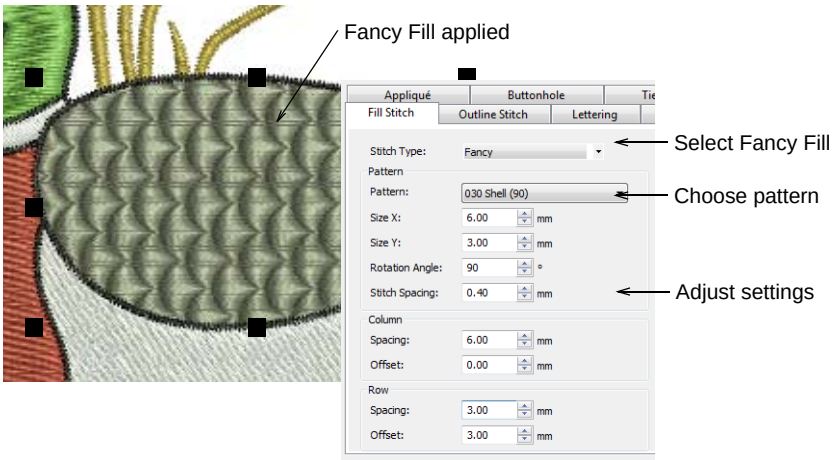
3 Double-click or right-click the duck head to open the **Object Properties** dialog, and select the **Fill Stitch** tab.



4 Select **Satin Special** in the **Satin Type** panel.

5 Click **Apply** to accept the changes and click **OK** to close.

6 Double-click or right-click the wing to open the **Object Properties** dialog, and select the **Fill Stitch** tab.



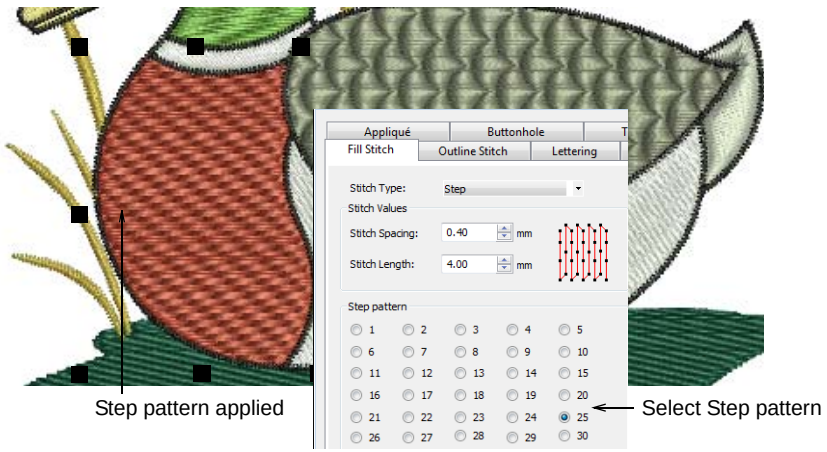
7 Select **Fancy** in the **Stitch Type** list and choose a pattern from the list – e.g. 030 Shell (90).

8 To avoid long stitches causing loops, we'll reduce the size of the pattern a little as follows:

- Size X: 6.00 mm
- Size Y: 3.00 mm
- Rotation Angle: 90°
- Column Spacing: 6.00 mm
- Row Spacing: 3.00 mm
- Row Offset: 3.00 mm.

9 Click **Apply** to accept the changes and click **OK** to close.

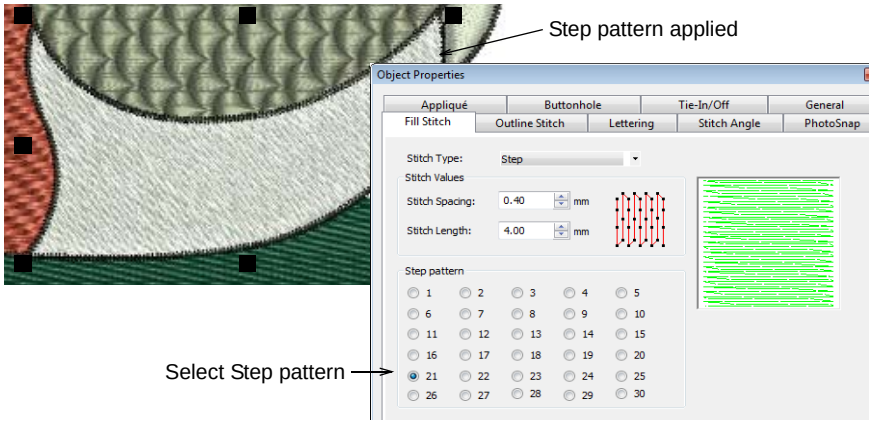
10 Double-click or right-click the breast to open the **Object Properties** dialog, and select the **Fill Stitch** tab.



11 Select Step Pattern 25.

12 Click **Apply** to accept the changes and click **OK** to close.

13 Double-click or right-click the body to open the **Object Properties** dialog, and select the **Fill Stitch** tab.

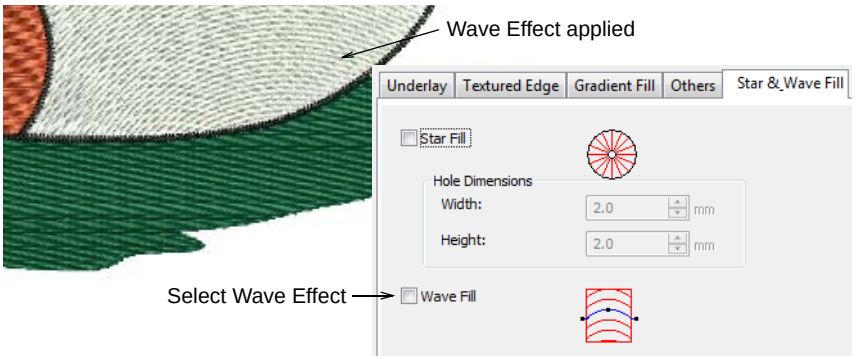


14 Select Step Pattern #21.

15 Click **Apply** to accept the default stitch settings.

Note The following **Wave Effect** feature is not available in BERNINA EditorPlus. If you are using this product level, proceed to the next topic.

16 Click the **Effects** button to open the **Effects** dialog and select the **Star & Wave Fill** tab. See also Creating wave effects in the Onscreen Manual.

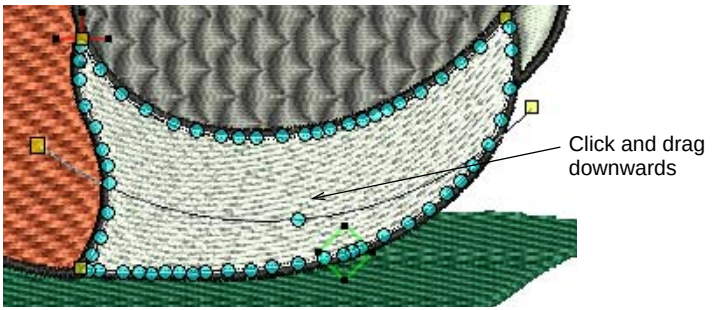


17 Select the **Wave Effect** checkbox and click **Apply**.

The angle of the wave effect can be improved to follow the contour of the body.

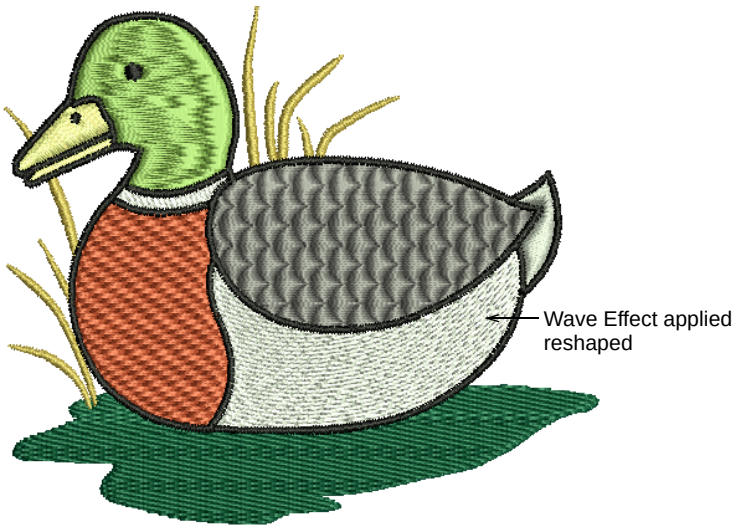
18 Close the dialog, select the object and select the **Reshape Object** tool.

The reshape nodes of the object as well as the wave angle are now visible. See also Reshaping objects in the Onscreen Manual.



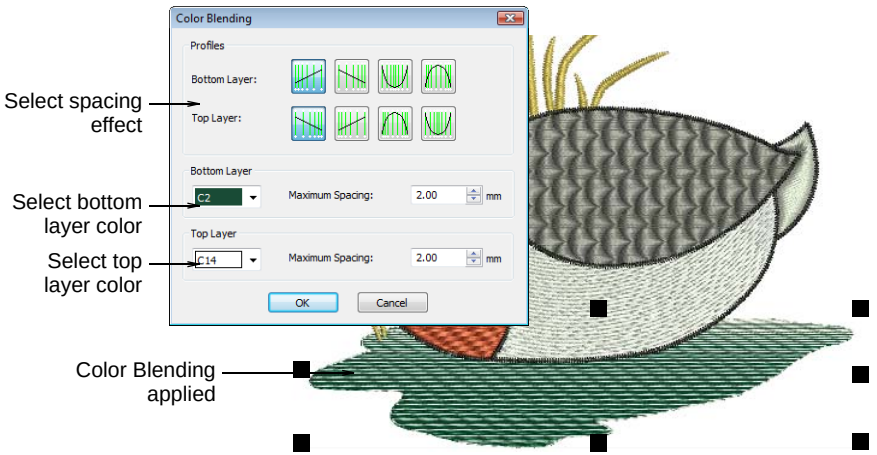
19 Click and drag the center point of the wave angle downwards so it inverts the curve and follows the contour of the body.

20 Press **Enter** to apply changes.



21 Select the water object and click the **Color Blending** tool.

The **Color Blending** dialog opens. See also Creating color blending effects in the Onscreen Manual.



22 In the **Profiles** panel, select a profile for top and bottom layers as shown.

23 Select color C2 for **Bottom Layer** and C14 for **Top Layer**.

24 Click **OK** to accept the default stitch spacing settings.

The water object is duplicated and 'blended' according to your chosen settings.

Finalizing the design

Use Auto Underlay (General toolbar) to strengthen and stabilize embroidery designs with automatic underlay.

Click Show Stitches (General toolbar) to toggle stitch view on/off.

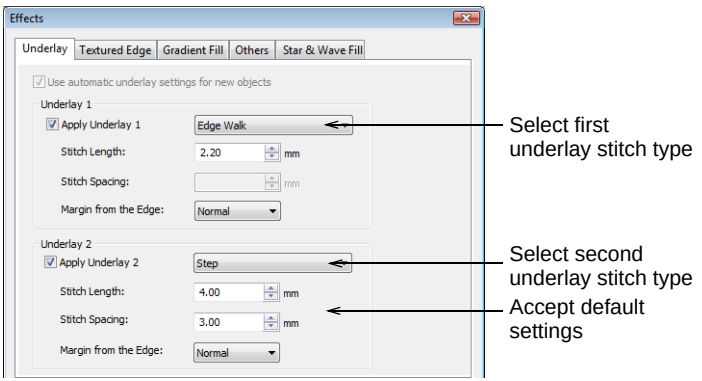
Use Show Pictures (General toolbar) to toggle backdrops on/off.

We're now almost ready to output our design but there are a few last details to attend to. First we'll add underlay to our embroidery to help stabilize the fabric and adjust pull compensation to reduce distortion. We'll also carry out a final check of the design properties to get a better idea of how it will stitch out.

To finalize the design

1 Right-click the **Auto Underlay** icon.

The **Effects > Underlay** dialog opens. See also Stabilizing with underlays in the Onscreen Manual.



Note The type of underlay you choose is determined by the purpose it is to serve. Not all underlay types are applicable to all selected objects.

2 Select the duck's head.

3 Select the **Apply Underlay 1** checkbox and select **Edge Walk** underlay from the list.

When you select the **Apply Underlay 1** option, the **Apply Underlay 2** checkbox becomes active. All underlay types available for Underlay 1 are also available for Underlay 2.

4 Select the **Apply Underlay 2** checkbox and select **Step** underlay from the list.

5 Click **Apply** accepting the default stitch length settings.

6 Repeat for the other objects in the design according to the settings shown in the table:

Object	Underlay 1	Underlay 2
Grass	Edge Walk	
Head	Edge Walk	Step
Top Beak	Edge Walk	
Neck ring	Edge Walk	
Breast	Edge Walk	Step
Body	Edge Walk	Step
Wing	Edge Walk	Step
Tail	Edge Walk	
Water †	None	

Note † If you are using BERNINA EditorPlus to create this project, you will need to add an underlay to the water object. Recommended settings are Edge Walk and Step for Underlays 1 & 2 respectively.

7 Close the dialog and press **Esc** to deselect all objects.

8 Select all objects by pressing **Ctrl+A**.

9 Holding down **Ctrl** key, click the color blocks 2 and 7 in the **Color Film**.

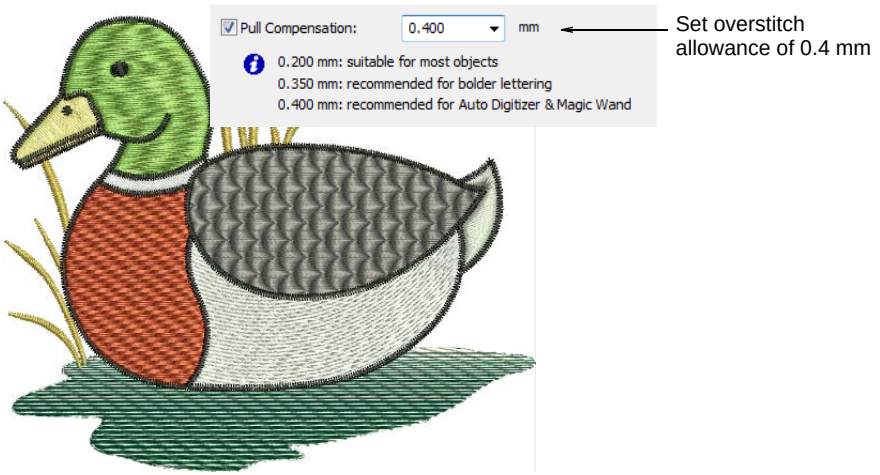
All objects except the pond and grass objects are selected.

10 Click the **Object Properties** icon.

The **Object Properties** dialog opens.

11 Click the **Effects** button.

The **Effects** dialog opens.

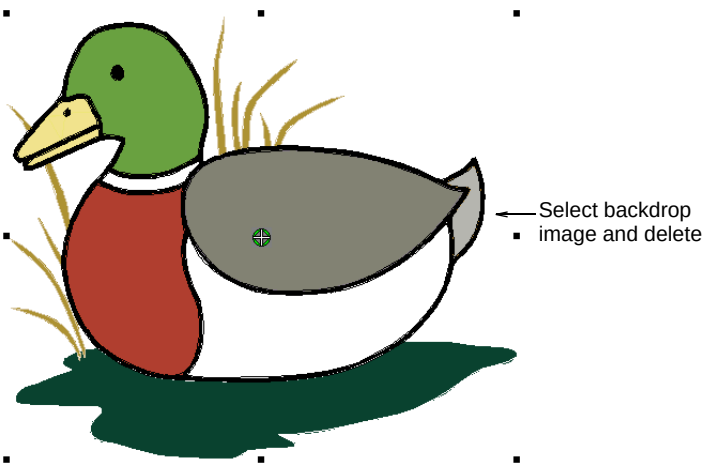

Pull Compensation:
0.400
mm
0.200 mm: suitable for most objects
0.350 mm: recommended for bolder lettering
0.400 mm: recommended for Auto Digitizer & Magic Wand
Set overstitch allowance of 0.4 mm

12 Select the **Others** tab and enter an overstitch allowance of 0.4 mm in the **Pull Compensation** field.

13 Click **Apply** to accept the changes.

This will result in a better looking outline stitch which, if too narrow, can result in gaps forming between outline and fill objects.

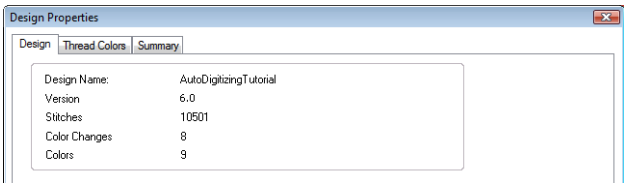
14 Deactivate **Show Stitches**, activate **Show Pictures**, select the backdrop image, and press **Delete**.



Note If you have opened a design saved with a backdrop image, you need to ungroup the design after re-opening before you can select and delete the image.

15 Click **Show Stitches** again and select **File > Design Properties**.

The **Design Properties > Design** dialog opens. The **Design** tab contains information about height and width and stitch count and colors. The data is extracted from the design and cannot be modified.



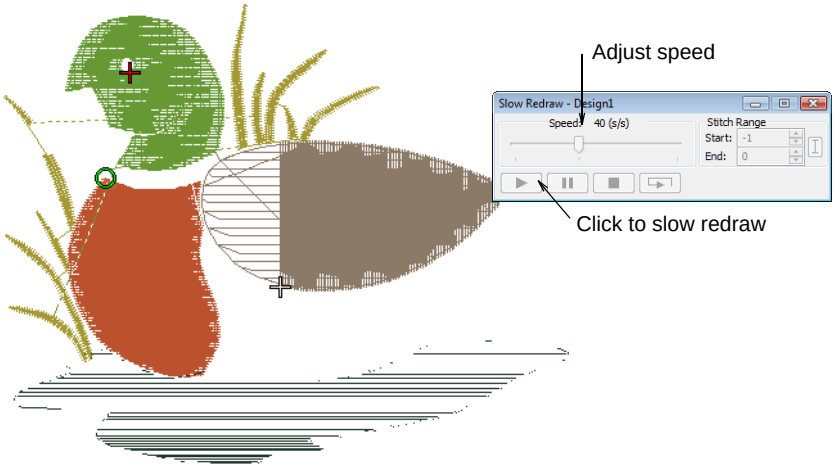
16 Observe the following details:

Design Property	BERNINA EditorPlus	BERNINA DesignerPlus
Stitch count	Approx. 12,100 stitches	Approx. 10,500 stitches
Color changes	8	8
Colors	9	9

Note We have one less color changes than colors. This is good because the number of trims, tie-ins and tie-offs are reduced to a minimum. Each color is only stitched once.

17 Select **View > Slow Redraw** or press **Shift+R**.

The **Slow Redraw** dialog opens.



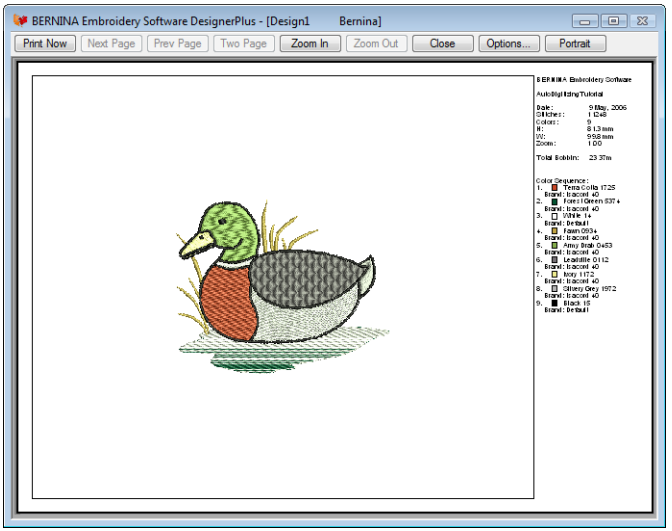
18 Click the **Go** button.

The design will stitch out on your machine exactly as you see it here. See Stitching out designs in the Onscreen Manual for details.

Tip The final result for this project is located in the 'Tutorials' folder. In fact, there are two final ART60 files – one for BERNINA DesignerPlus and one for BERNINA EditorPlus. Both files can be found in the folder. You may want to compare it at this point with your own completed design.

19 Click the **Print Preview** icon.

The design displays as it will be printed. See Printing designs in the Onscreen Manual for details.



20 Change printing options by clicking the **Options** button. See Setting print options for embroidery in the Onscreen Manual for details.

Note Large designs may be displayed over a number of pages if printed at actual size. Use **Next Page**, **Previous Page** or **Two Pages** to view multiple pages.

21 Click **Close** to exit the print preview.

22 Use **Write to Machine** to send your design directly to your BERNINA® Embroidery Software home embroidery machine ready to stitch. See Stitching out designs in the Onscreen Manual for details. See also detailed instructions provided in your embroidery machine documentation.

CHAPTER 9
DIGITIZING TUTORIAL

In this tutorial we will be using a combination of manual and automatic digitizing techniques to create an embroidery design from scratch. We start with an artwork backdrop and see how to size it to the correct dimensions. We then choose our thread colors and select the fabric type we are going to work with. We then start digitizing basic shapes with fills and outlines and explore best practices as we go along. We look at some specialist techniques such as cutting and filling holes in objects. Finally, we look at applying underlay to our design and printing out a worksheet. The tutorial can be completed with BERNINA DesignerPlus.

Note All steps required to complete the quick-start project are provided here. For further information, however, you are referred to the Onscreen Manual.

Getting started

Use Art Canvas to load, edit and save pictures as a backdrop for embroidery digitizing.

Use Embroidery Canvas mode to create and edit embroidery designs. Show embroidery shapes as well as graphics. View designs realistically in Artistic View.

Use Load Picture (Image toolbar) to load an image for use as a digitizing backdrop.

For the purposes of this tutorial, our design is to be stitched on the front of a children's light-weight knit T-shirt, approximately 80 mm x 90 mm (3.15"

x 3.54"). When we insert the artwork, resize it to fit the T-shirt, and choose a suitable hoop to hold the design. As our starting point, we're going to use one of the sample designs packaged with the software.

Tip Your BERNINA Embroidery Software comes with a range of artwork and embroidery designs that you can use as a starting point for your own projects. In addition to the packaged sample designs, you will find a dedicated 'Tutorials' folder which contains all the files you need to complete this and other tutorials. The final result of this and other projects is also located in this folder. You may want to view the completed project file before and/or after completing the tutorial. See also Working with design files.

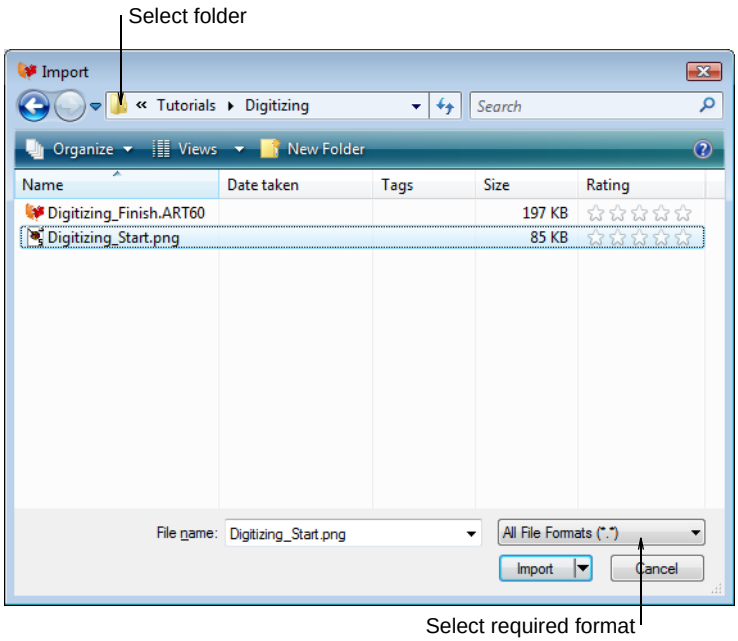
To get started

1 Double-click the BERNINA Embroidery Software shortcut icon on the MS Windows® desktop.

BERNINA Embroidery Software opens with a new, blank design (Design1) with the default hoop selected.

2 Switch to **Art Canvas** mode and click the **Load Picture** icon.

The **Import** dialog opens.

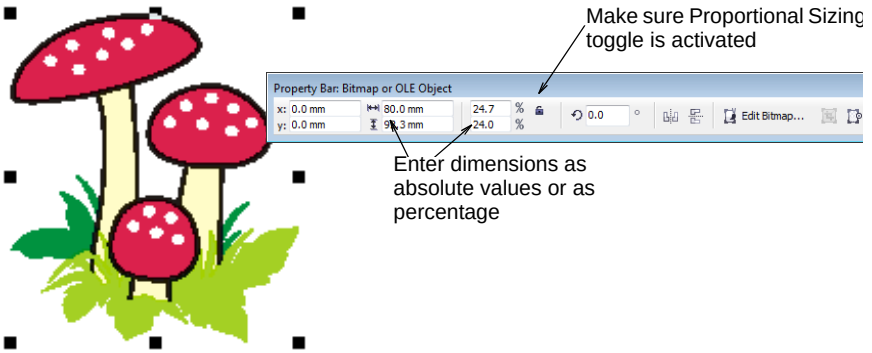


3 Navigate to the **My Designs - Embroidery Software 6** folder and select the **Tutorials > Digitizing** folder.

4 Select the 'Digitizing_Start.PNG' file and click **Import**.

5 Press **Enter** to center the imported artwork on the page.

The picture opens in the Design Window.



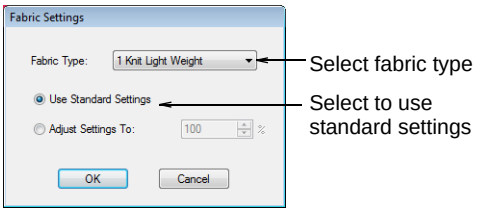
6 Ensuring that the **Proportional Sizing** toggle is activated, in the **Width** (X) field of the **Property Bar**, enter a value of 80 mm (3.86") and press **Enter**.

The width should now be 80 mm (3.15") and the height approximately 92.3 mm (3.63").

7 Switch to **Embroidery Canvas** and press **Esc** to deselect artwork.

8 Select **Settings > Fabric Settings**.

The **Fabric Settings** dialog opens.



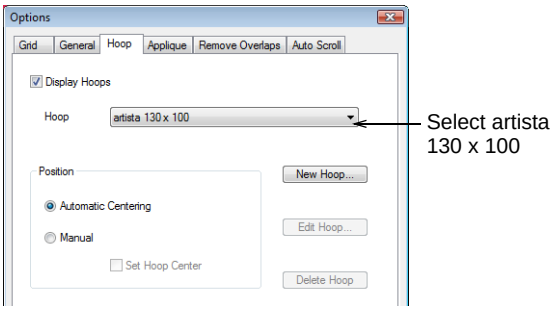
9 In the **Fabric Type** dropdown list, select 'Knit Light Weight'.

10 Accept the standard settings and click **OK**.

These fabric settings will be applied to all newly created objects in the design.

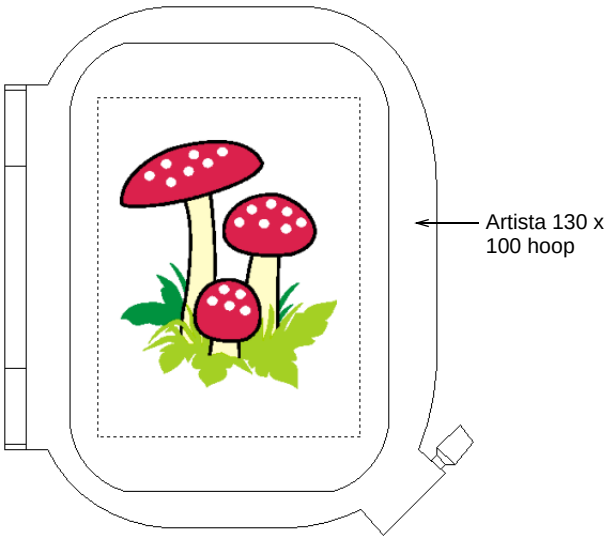
11 Right-click the **Show Hoop** icon.

The **Options > Hoop** dialog opens.



12 Select 'artista 130 x 100' from the **Hoop** list.

13 Click **OK**.

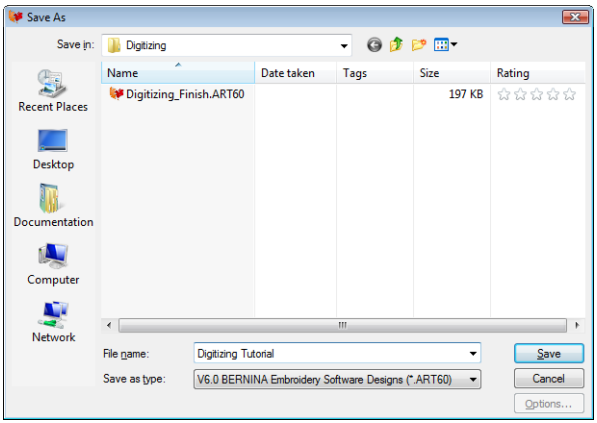


14 Zoom out to better view the hoop – select the **Zoom Box** tool and right-click the design once.

Tip Once you have selected a hoop you can toggle it on or off by clicking the **Show Hoop** icon.

15 Select **File > Save As**.

The **Save As** dialog opens.



Tip The **Save As** dialog opens to the same location where the original file is stored.

16 Enter a suitable name – 'DigitizingTutorial' – in the **File Name** field.

17 Click **Save**.

Tip Subsequently, you only have to click the **Save** button or **Ctrl+S** to save any changes.

Preparing for digitizing

Use Image Preparation (Edit toolbar) to sharpen outlines and reduce noise in outlined images.

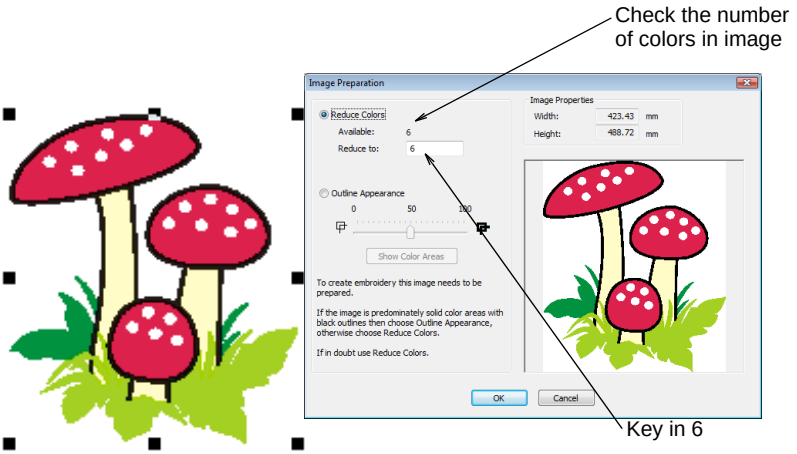
Now that we've sized the artwork and selected a suitable hoop, we can digitize the design. First, however, we need to prepare the artwork for automatic digitizing and set up our Color Palette.

To prepare for digitizing

1 In **Embroidery Canvas** mode, select the image.

2 Click the **Image Preparation** icon.

The **Image Preparation** dialog opens with the image in the preview panel.


Check the number of colors in image
Image Preparation
Reduce Colors
Available: 6
Reduce to: 6
Outline Appearance
Show Color Areas
To create embroidery this image needs to be prepared.
If the image is predominately solid color areas with black outlines then choose Outline Appearance, otherwise choose Reduce Colors.
If in doubt use Reduce Colors.
Image Properties
Width: 423.43 mm
Height: 488.72 mm
OK
Cancel
Key in 6

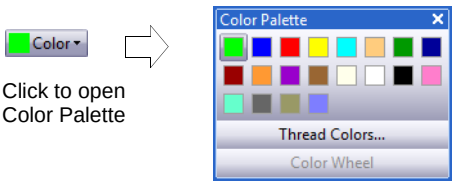
3 Note that there are 6 available colors in the image which the software wants to reduce to 5. Since we do not actually want to reduce the number of colors in this artwork, key '6' into the **Reduce to** field.

4 Click **OK**.

The image is ready for automatic digitizing.

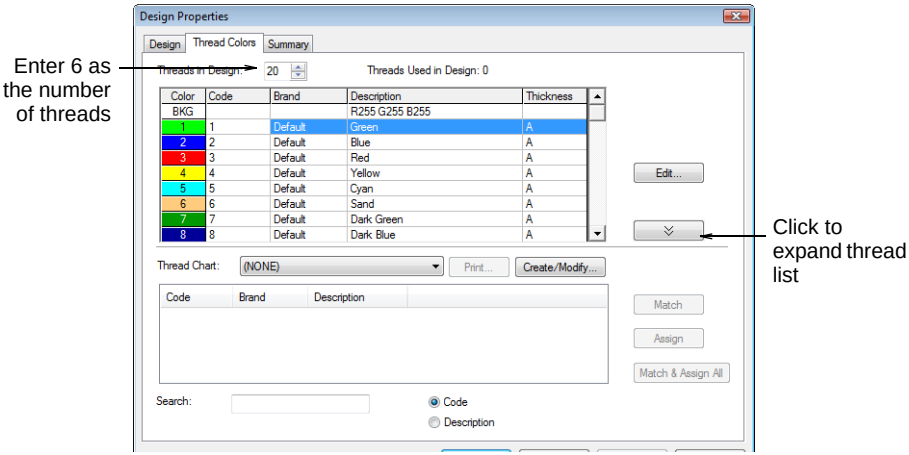
5 Click the **Color** icon.

The **Color Palette** opens.



6 Click the **Thread Colors** link.

The **Design Properties** dialog opens with the **Thread Colors** tab active. The colors in the current design appear in the upper **Threads in Design** panel.



7 In the **Threads in Design** field, enter '6' as the number of threads to use in the design and click **Apply**.

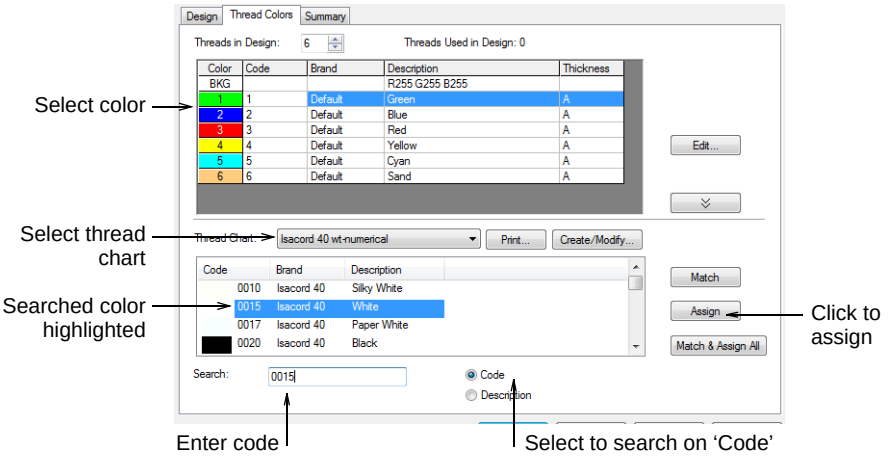
8 Select 'Isacord 40 wt-numerical' from the **Thread Chart** list.

Tip In practice, you can select the thread chart for the brand of thread you have at home, or select a chart which includes colors you like, or a chart which you have added yourself. You can even mix and match threads from different brands. See Creating custom thread charts in the Onscreen Manual for details.

9 Select the first design color in the **Threads in Design** list.

10 Select the **Code** option and enter '0015' in the **Search** field.

The system searches for the thread and highlights it in the list.



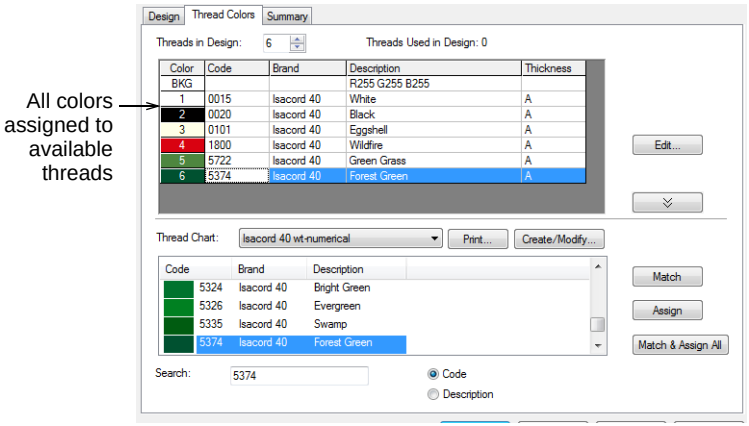
11 Click **Assign** or double-click the thread.

The selected color in the **Threads in Design** list is replaced by the highlighted thread color.

12 Assign the rest of colors with the threads shown in the table:

Color #	Isacord 40 code	Description
1	0015	White
2	0020	Black
3	0101	Eggshell
4	1800	Wildfire
5	5722	Green Grass
6	5374	Forest Green

13 Click **Apply** to accept the changes and click **OK** to close.



Note Selected color settings only apply to the current design and are part of the 'design properties'. They are saved with the design.

Digitizing the design

Click Show Stitches (General toolbar) to toggle stitch view on/off.

Click Show Artistic View (General toolbar) to toggle artistic or 'stitchout' view on/off.

Use Magic Wand (Digitize toolbar) to digitize filled shapes in your artwork.

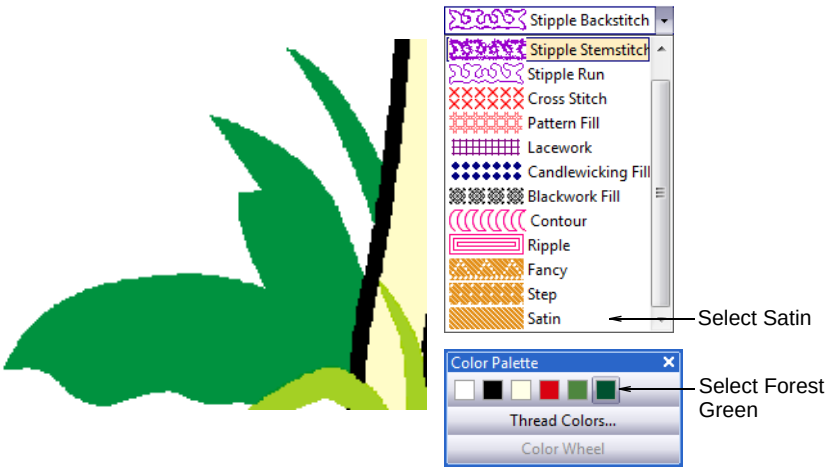
Use Closed Object (Digitize toolbar) to digitize irregular closed shapes.

We can now start digitizing the main objects in the design. For the purposes of the exercise, we'll be using a combination of automatic and manual techniques. The background and foreground grass objects can be auto-digitized with the **Magic Wand** tool. For more precise work on the stems and caps where overlaps are important to prevent gaps occurring, we'll be using manual digitizing techniques.

Tip Before doing any manual digitizing, make sure you are familiar with the concept of reference points and reshape nodes. See Digitizing tools for details.

To digitize the design

1 In **Stitch View** or **Artistic View**, press **B** on the keyboard to click and drag a zoom box around the background grass (dark-green). See Zooming and panning for details.

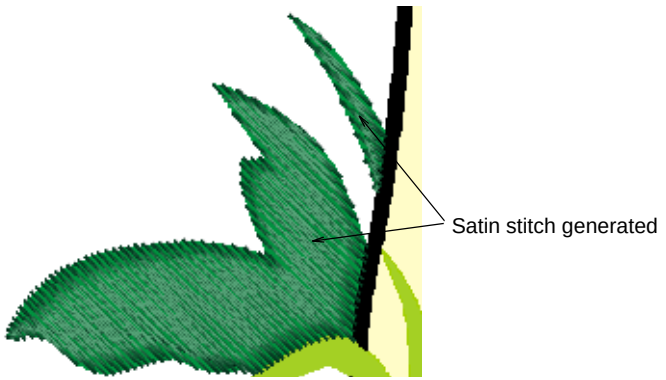


2 Select **Satin** from the **Fill** stitch type list. See Selecting or changing stitches in the Onscreen Manual for details.

3 Click the **Color** icon and select C6 (Forest Green) from the **Color Palette**. See Changing current colors in the Onscreen Manual for details.

4 Select the **Magic Wand** tool, click the background grass shape (dark-green), and press **Enter** to generate the object.

Stitches are generated according to current Satin stitch settings.



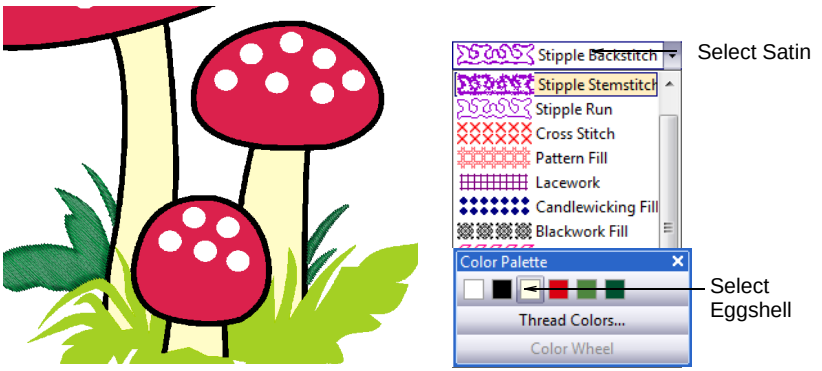
5 Do the same with the other dark green grass shapes.

6 Press **0** (zero) on the keyboard to view the entire design and check your work in **Artistic View**.

Note The larger dark-green grass objects are a little too wide for Satin. We will fix this later.

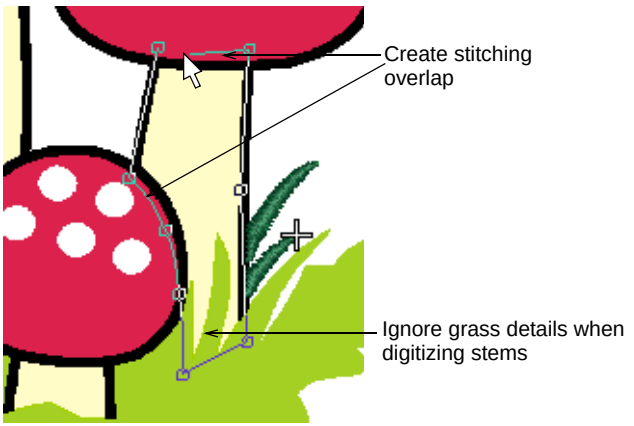
7 Select **Satin** from the **Fill** stitch type list. See Selecting or changing stitches in the Onscreen Manual for details.

8 Click the **Color** icon and select C3 (Eggshell) from the **Color Palette**. See Changing current colors in the Onscreen Manual for details.



9 Select the **Closed Object** tool and digitize the right stem.

Pinpoint accuracy is not required because we will edit the reshape nodes later. Make sure the stitching overlaps the red caps and ignore grass details at the bottom. See Digitizing closed shapes in the Onscreen Manual for details.

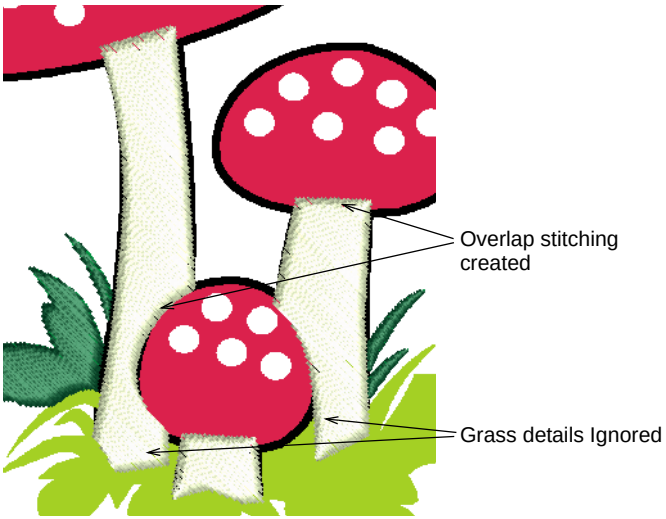


Tip Follow the prompts in the **Status Bar** to help you digitize. If you make a mistake, press **Backspace** to delete the last reference point, then continue adding reference points or press **Esc** to delete all the points so you can start again.

10 Press **Enter** to finish.

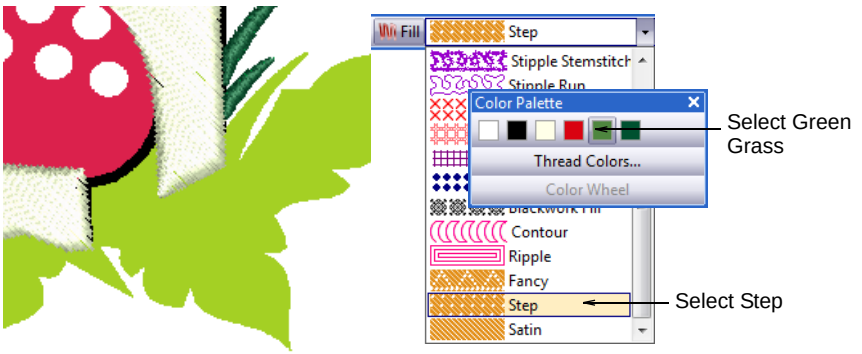
Stitches are generated immediately.

11 Digitize the center and left stems in the same manner.



Tip Press **0** (zero) on the keyboard to view the entire design and check your work in **Artistic View**. Note that the stems are a little too wide for plain Satin. We will fix this later.

12 In **Stitch View** or **Artistic View**, press **B** on the keyboard to click and drag a zoom box around the foreground grass (light-green). See Zooming and panning for details.



13 Select **Step** from the **Fill** stitch type list. See Selecting or changing stitches in the Onscreen Manual for details.

14 Click the **Color** icon and select C5 (Green Grass) from the **Color Palette**. See Changing current colors in the Onscreen Manual for details.

15 Select the **Magic Wand** tool, click the foreground grass shape (light-green), and press **Enter** to generate the object.

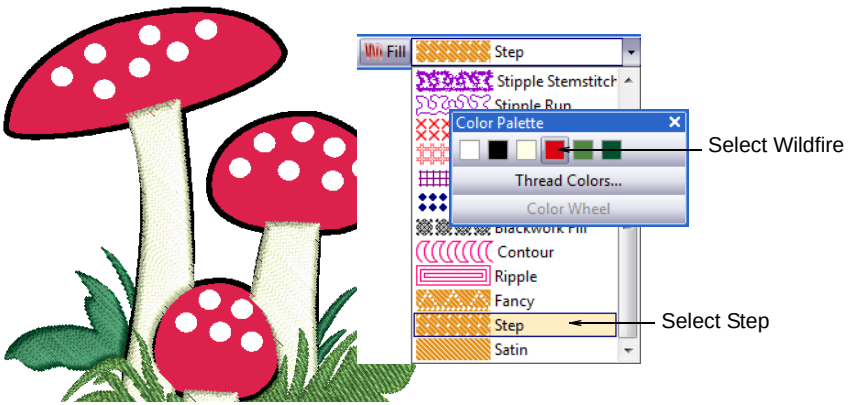
Stitches are generated according to current Step stitch settings.

16 Press **0** (zero) on the keyboard to view the entire design and check your work in **Artistic View**.

Note The foreground grass does not look very 'grass-like'. We will improve the appearance later.

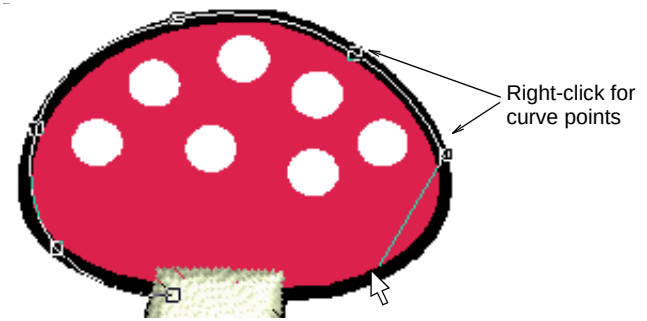
17 Select **Step** from the **Fill** stitch type list. See Selecting or changing stitches in the Onscreen Manual for details.

18 Click the **Color** icon and select C4 (Wildfire) from the **Color Palette**. See Changing current colors in the Onscreen Manual for details.



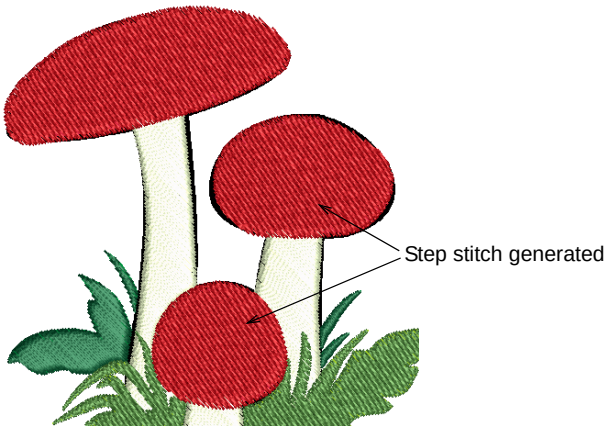
19 Select the **Closed Object** tool and digitize all the mushroom caps.

Because they are roundish objects, you will be using mostly curve points by right-clicking.



20 Press **Enter** to finish.

Stitches are generated immediately.



21 Press **0** (zero) on the keyboard to view the entire design and check your work in **Artistic View**.

Note Depending on how careful you have been while digitizing, the outline of the mushroom caps may not quite align with the artwork shapes. This is easily fixed with the aid of the **Reshape Object** tool.

Editing the grass, stems, and caps

Click Reshape Object (Edit toolbar) to view the reshape nodes of a selected object.

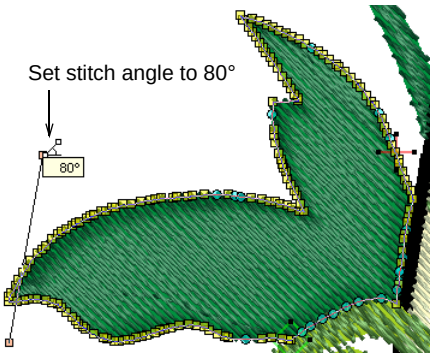
When we inspected our newly digitized objects in **Artistic View**, we noticed a few minor problems with a few of them. We will now edit the grass and stem objects which are a little wide for straight Satin stitch. We will also fix the outlines of the mushroom cap objects.

Tip Save your design frequently so you don't lose your work in the event of a power or system failure. See also Saving designs.

Edit the grass and stems

1 Select the largest background grass object and click the **Reshape Object** icon.

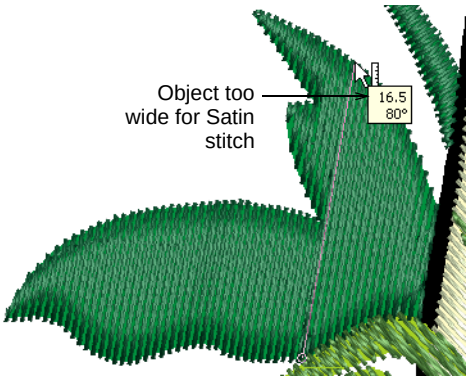
2 Click and drag one point of the stitch angle to set it to approximately 80°, and press **Enter** to regenerate stitches. See Adjusting stitch angles in the Onscreen Manual for details.



3 Similarly, adjust the stitch angle of the remaining background grass objects so that it is more or less perpendicular to their length.

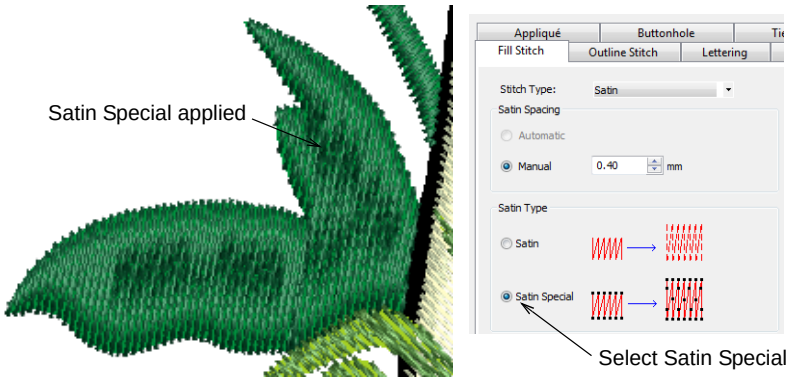
4 Press **M** on the keyboard and measure the largest background grass object. See Measuring distances onscreen for details.

Notice that it is a little wide for Satin stitch. Use **Satin Special** when the object is greater than 10 mm in width.



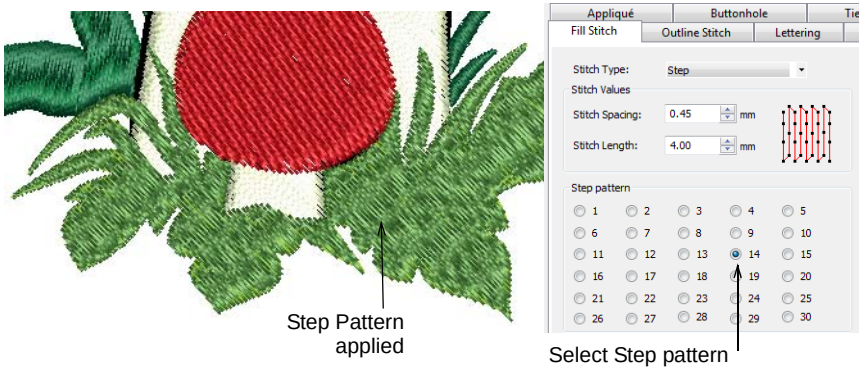
5 Double-click or right-click the largest background grass object to open the **Object Properties** dialog, and select the **Fill Stitch** tab.

6 Select **Satin Special** and click **Apply**.



7 Select the light-green grass object.

The **Object Properties > Fill Stitch** tab changes to show Step Fill options.



8 Select the Step Pattern #14 for a more grassy appearance. See also Applying Step patterns in the Onscreen Manual.

9 Click **Apply** to accept the changes and click **OK** to close.

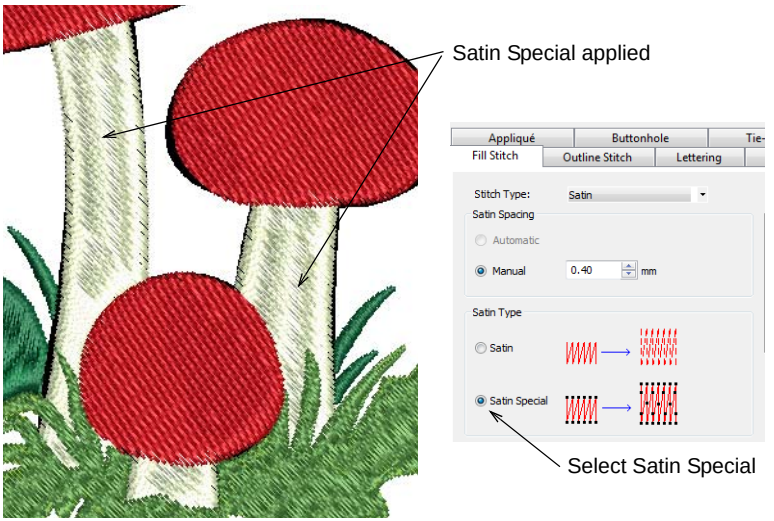
10 Press **0** (zero) on the keyboard to view the entire design, and check your work in **Artistic View**.

Note The foreground grass object has now taken on a more grassy appearance but we can improve it further with the addition of an outline to emphasize the contour of the shape.

11 Select a stem object and holding the **Ctrl** key, click the other stems.

12 Double-click or right-click the stems to open the **Object Properties** dialog, and select the **Fill Stitch** tab.

13 Select **Satin Special**.



14 Click **Apply** to accept the changes and click **OK** to close.

15 Press **0** (zero) on the keyboard to view the entire design, and check your work in **Artistic View**.

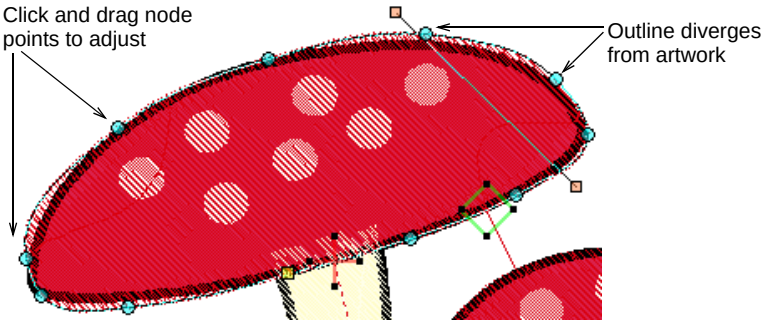
Note The appearance of the stems is improved with the application of **Satin Special** but they can be improved further with the addition of a dark outline. We'll add this shortly.

16 Select the largest mushroom cap object.

Tip It's easier to see the outlines of the stitching and the artwork in Stitch View.

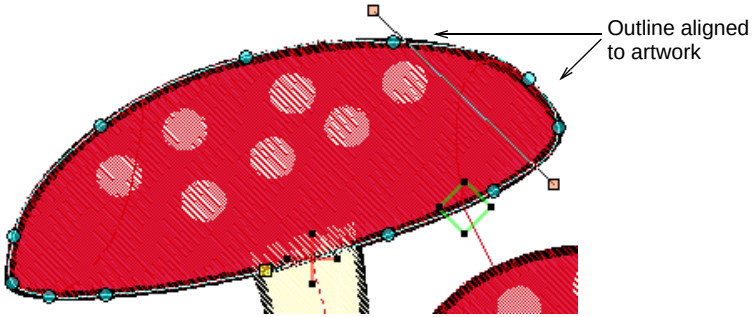
17 Click the **Reshape Object** tool.

Reshape nodes and stitch angle line appear.



18 Click and drag, add and delete the reshape nodes as required and press **Enter** to accept the changes. See Reshaping objects using reshape nodes in the Onscreen Manual for details.

19 Press **Esc** to finish.



20 Repeat the same for other mushroom caps.

21 Press **0** (zero) on the keyboard to view the entire design, and check your work in **Artistic View**.

Note The white spots of the mushroom caps are covered by the red stitching. We will cut holes in the caps shortly and fill them with white stitching. We can also emphasize their appearance with the addition of a dark outline.

Finishing the mushroom caps

Use Add Holes (Edit toolbar) to cut holes in objects.

We noted that the red stitching of the mushroom caps entirely covers the white spots. One solution would be to add a white circle object, clone it, and then cut out the underlying stitching. Alternatively, we can cut the holes first and use those holes to automatically generate fill objects.

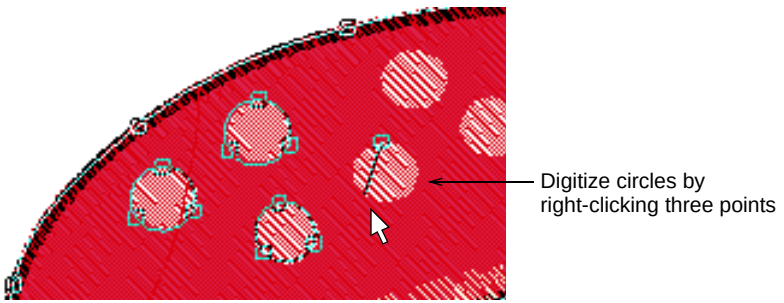
Note We demonstrate this technique in relation to a single mushroom cap. Repeat the same procedure for the other mushroom caps. Or experiment with the technique first mentioned. See Cutting holes and removing overlaps in the Onscreen Manual for details.

To finish the mushroom caps

1 Switch to Stitch View and select the largest mushroom cap.

2 Click the **Add Holes** tool.

Reference points display around the object outline.

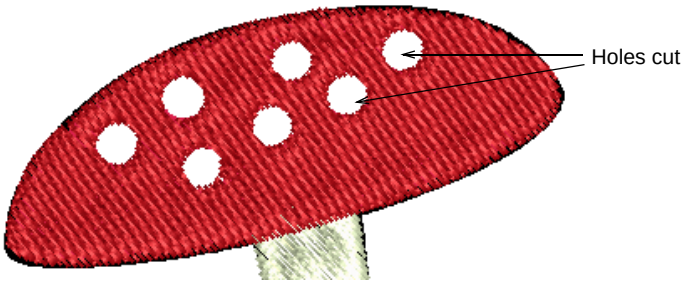


3 Digitize a circle shape by right-clicking three points over the white spots.

Tip Follow the prompts in the **Status Bar**.

4 Press **Enter** once to close the circle.

5 Repeat for other white spots and press **Enter** to complete the operation.



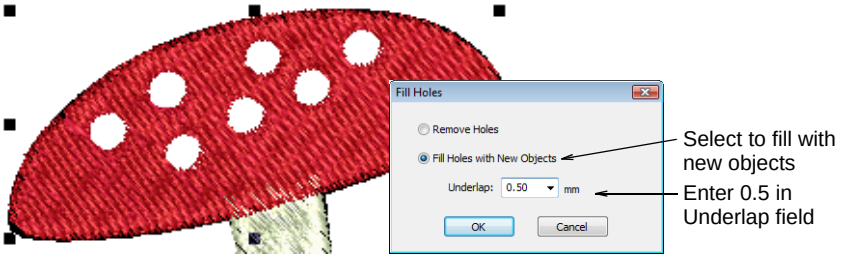
6 Press **0** (zero) on the keyboard to view the entire design and check your work in **Artistic View**.

Note With all the holes cut over the white spots, we now need to fill them with white stitching.

7 Select the mushroom cap you have just been working with.

8 Click **Arrange** > **Fill Holes**.

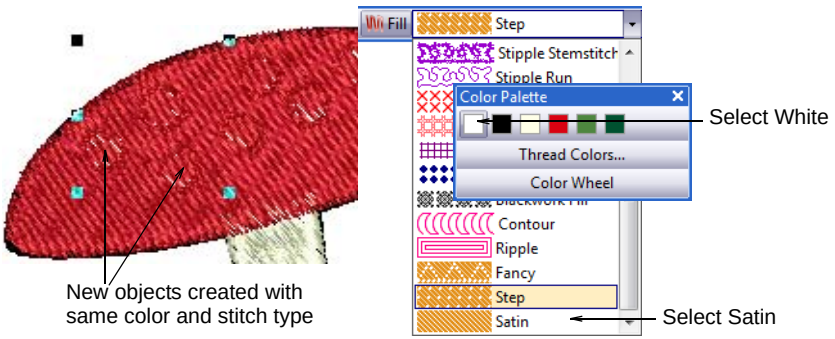
The **Fill Holes** dialog opens.



9 Select **Fill Holes with New Objects** and type in 0.5 (mm) in the underlap field.

10 Click **OK**.

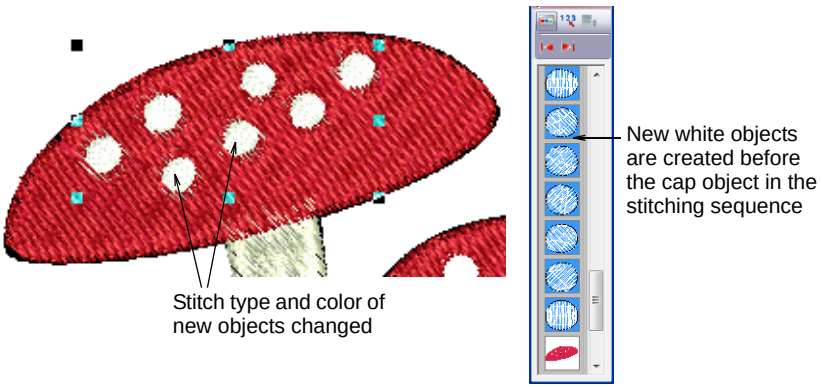
Objects are generated to fill all holes in the mushroom caps. They all use the same color and stitch type as the mushroom cap has.



11 Select **Satin** from the **Fill** stitch type list. See Selecting or changing stitches in the Onscreen Manual for details.

12 Click the **Color** icon and select C1 (White) from the **Color Palette**. See Changing current colors in the Onscreen Manual for details.

Note Note that the newly created white objects are **before** the red cap object in the stitching sequence. We will change the stitching sequence next.

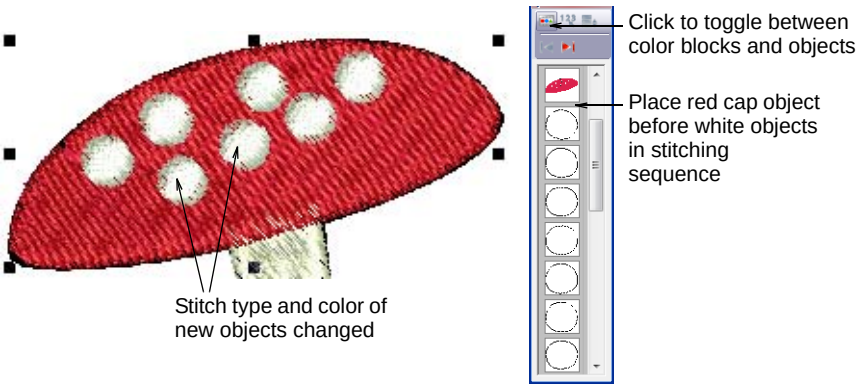

New white objects are created before the cap object in the stitching sequence
Stitch type and color of new objects changed

13 Press **0** (zero) on the keyboard to view the entire design and check your work in **Artistic View**.

14 Click the **Color Film** icon.

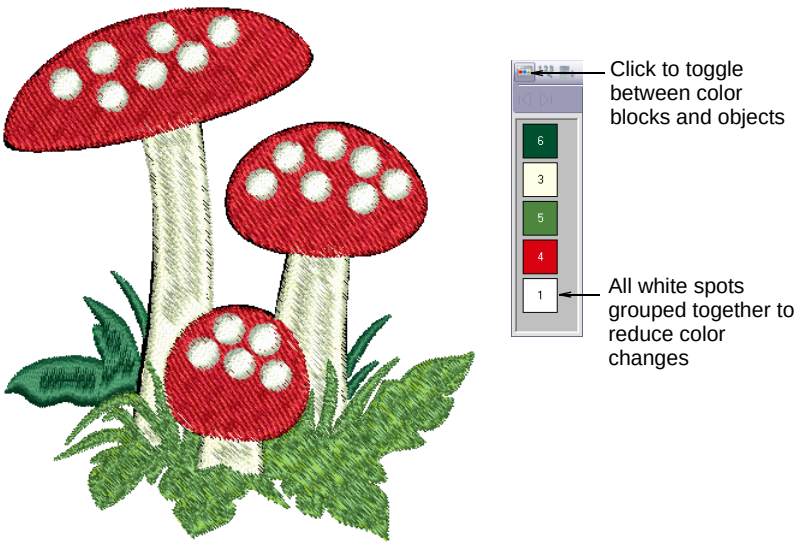
The **Color Film** toolbar opens displaying all color blocks in the design in order of stitching sequence. See Viewing and selecting color blocks for details.

15 Click the **Show Individual Objects** icon.


Stitch type and color of new objects changed
Click to toggle between color blocks and objects
Place red cap object before white objects in stitching sequence

16 Drag and drop the red cap object before the new white objects.

Note The technique described above relates to a single mushroom cap. Repeat for the other mushroom caps as well. When you have finished, group all the white spots together using the Color Film as shown below. This means they will all be stitched together, reducing the number of color changes.



Digitizing outlines

Use Open Object (Digitize toolbar) to digitize open shapes.

We noted previously that the foreground grass, stems and caps could be improved with the addition of a dark outline. We'll do that now.

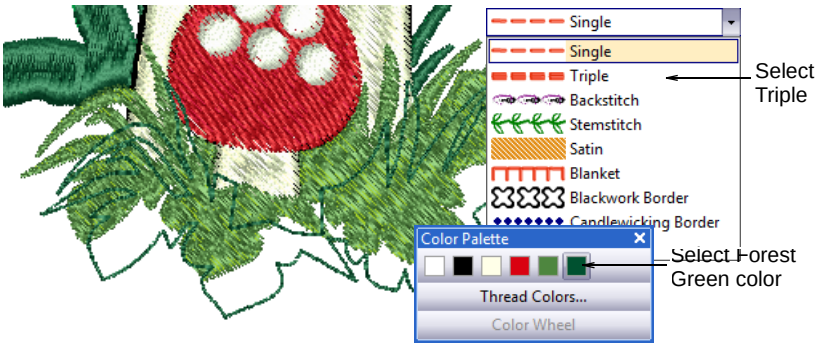
Tip Save your design frequently so you don't lose your work in the event of a power or system failure. See also Saving designs.

To digitize the outlines

1 Right-click and drag the foreground grass object (light-green) to create a cloned copy. See Cloning objects in the Onscreen Manual for details.

2 Select **Triple** from the **Outline** stitch type list. See Selecting or changing stitches in the Onscreen Manual for details.

3 Click the **Color** icon and select 'C6' (Forest Green) from the **Color Palette**. See Changing current colors in the Onscreen Manual for details.



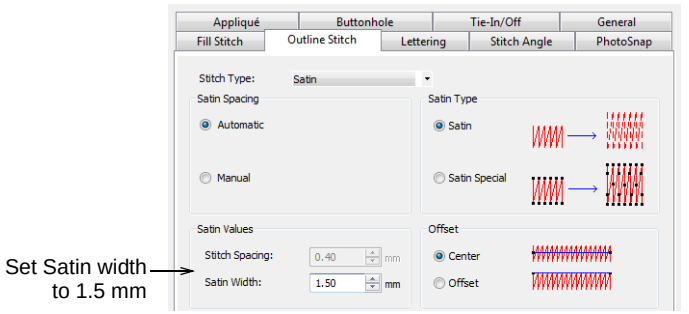
4 With the outline object selected, select the foreground grass object holding down the **Ctrl** key to select both.

5 Click the **Align Centers** icon.

The outline object is aligned to the grass object.

6 Press **0** (zero) on the keyboard to view the entire design and check your work in **Artistic View**.

7 With no object selected, click the **Object Properties** icon and select the **Outline Stitch** tab.



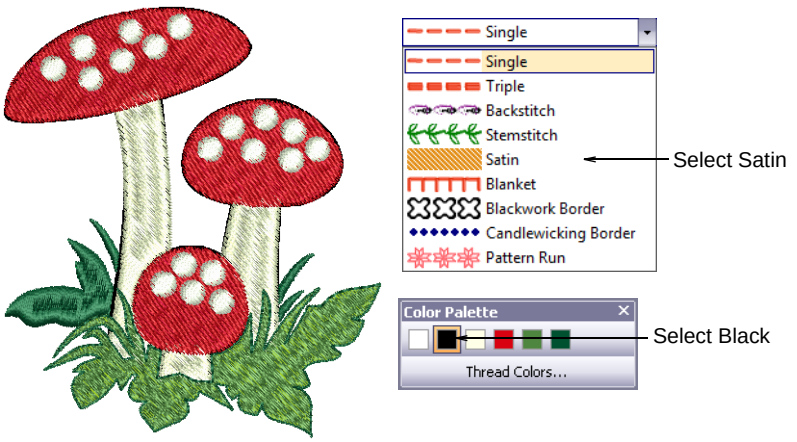
8 Select **Satin** from the **Outline** stitch type list and set the **Satin Width** to 1.5 mm. See Selecting or changing stitches in the Onscreen Manual for details.

9 Click **Apply** to accept the changes and click **OK** to close.

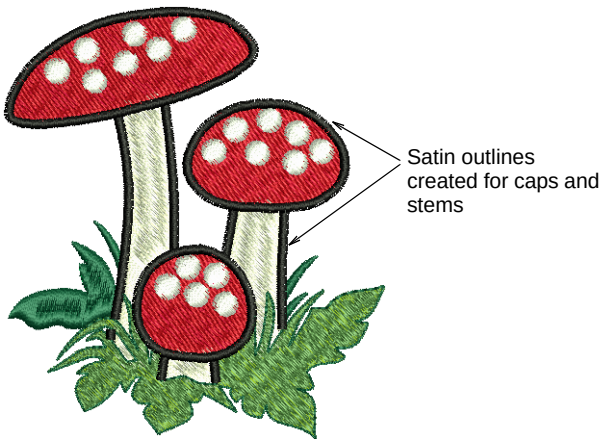
The new setting automatically applies to any new objects created in the current design.

10 Click the **Color** icon and select 'C2' (Black) from the **Color Palette**. See Changing current colors in the Onscreen Manual for details.

11 Click the **Open Object** icon.



12 Digitize all stem outlines followed by the caps. See Digitizing open shapes in the Onscreen Manual for details.



Tip If you make a mistake you can easily correct them using the **Reshape Object** tool. See Reshaping objects in the Onscreen Manual for details.

13 Press **0** (zero) on the keyboard to view the entire design and check your work in **Artistic View**.

Finalizing the design

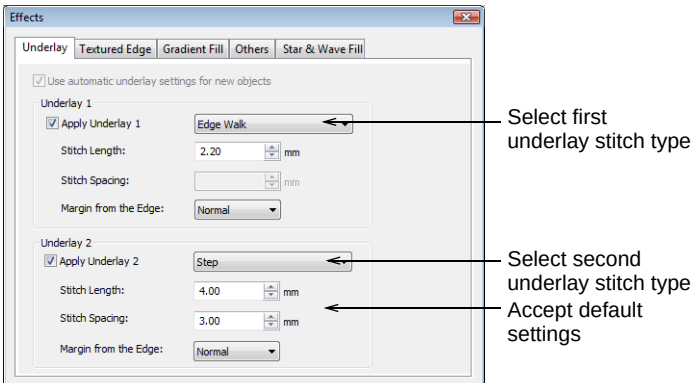
We're now almost ready to output our design but there are a few last details to attend to. First we'll add underlay to our embroidery to help stabilize the fabric and reduce distortion. We'll also carry out a final check of the design properties to get a better idea of how it will stitch out.

Tip Save your design frequently so you don't lose your work in the event of a power or system failure. See also Saving designs.

To finalize the design

1 Right-click the **Auto Underlay** icon.

The **Effects > Underlay** dialog opens.



Note The type of underlay you choose is determined by the purpose it is to serve. Not all underlay types are applicable to all selected objects.

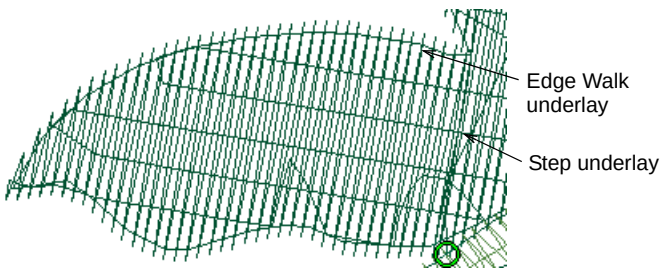
2 Select the largest background grass object.

3 Select the **Apply Underlay 1** checkbox and select **Edge Walk** underlay from the list.

When you select the **Apply Underlay 1** option, the **Apply Underlay 2** checkbox becomes active. All underlay types available for Underlay 1 are also available for Underlay 2.

4 Select the **Apply Underlay 2** checkbox and select **Step** underlay from the list.

5 Click **Apply** accepting the default stitch length settings.



Tip Check the underlay stitching, hiding artwork and zooming in on an area in Stitch View. See Viewing backdrops and Zooming and panning.

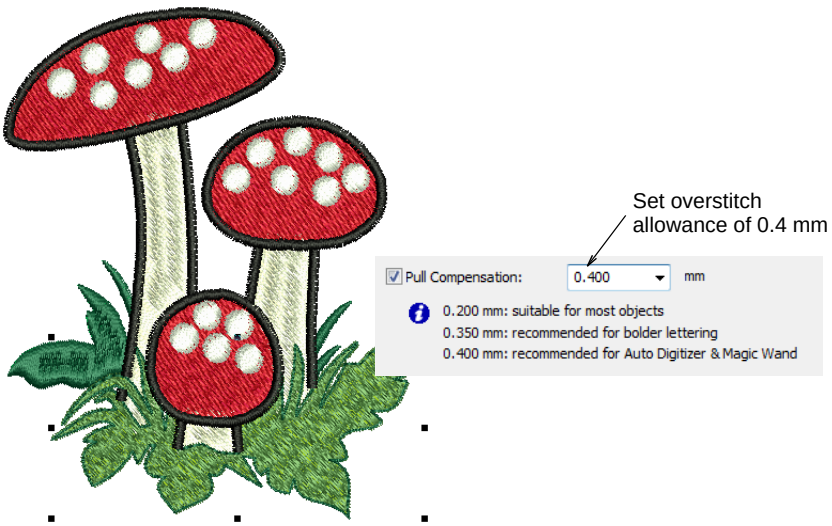
6 Repeat for the other objects in the design according to the settings shown in the table:

Object	Underlay 1	Underlay 2
Large dark green grass	Edge Walk	Step
Dark green blades of grass	Edge Walk	
Light-green grass object	Edge Walk	Step
Mushroom stems	Edge Walk	Step
Mushroom caps	Edge Walk	Step
Cap spots	Edge Walk	

7 Select all the foreground grass objects.

8 Click the **Object Properties** icon to open the **Object Properties** dialog.

9 Click the **Effects** button and select the **Others** tab.

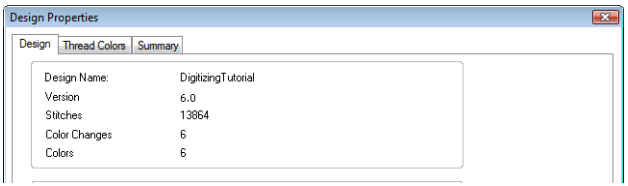

Set overstitch allowance of 0.4 mm
Pull Compensation:
0.400
mm
0.200 mm: suitable for most objects
0.350 mm: recommended for bolder lettering
0.400 mm: recommended for Auto Digitizer & Magic Wand

10 Enter an overstitch allowance of 0.4 mm the **Pull Compensation** field and click **Apply**.

This will result in a better looking outline stitch which, if too narrow, can result in gaps forming between outline and fill objects.

11 Select **File > Design Properties**.

The **Design Properties > Design** dialog opens. The **Design** tab contains information about height and width and stitch count and colors. The data is extracted from the design and cannot be modified.



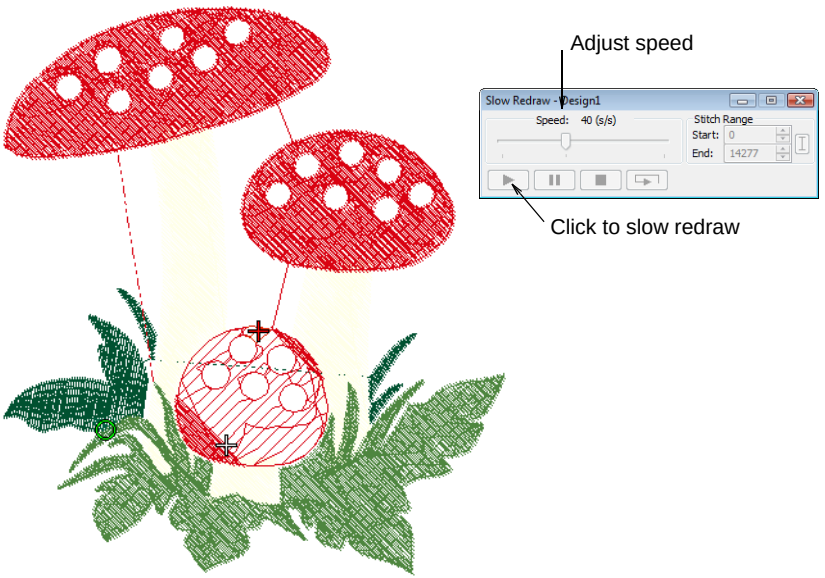
12 Observe the following details:

- Stitch count: approx. 13,900 stitches
- Color changes: 6
- Colors: 6.

Note We have as many color changes as we have colors. This is good because it means we have reduced the number of trims, tie-ins and tie-offs to a minimum. The only color that is stitched twice is the forest green – first for the background grass and then for the outline of the foreground grass.

13 In Stitch View, select **View > Slow Redraw** or press **Shift+R**.

The **Slow Redraw** dialog opens.



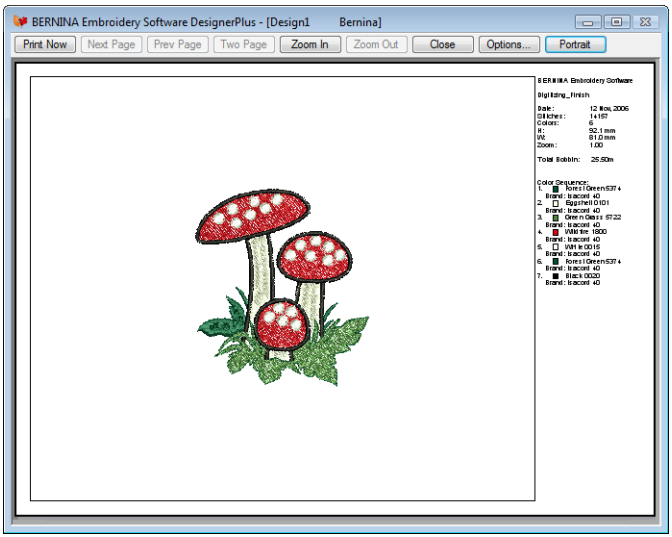
14 Click the **Go** button.

The design will stitch out on your machine exactly as you see it here. See Outputting Designs in the Onscreen Manual for details.

Tip The final result of this project is located in the 'Tutorials' folder. You may want to compare it at this point with your own completed design.

15 Click the **Print Preview** icon.

The design displays as it will be printed. See Printing designs in the Onscreen Manual for details.



16 Change printing options by clicking the **Options** button. See Setting print options for embroidery in the Onscreen Manual for details.

Note Large designs may be displayed over a number of pages if printed at actual size. Use **Next Page**, **Previous Page** or **Two Pages** to view multiple pages.

17 Click **Close** to exit the print preview.

18 Use **Write to Machine** to send your design directly to your BERNINA home embroidery machine ready to stitch. See Stitching out designs in the Onscreen Manual for details. See also detailed instructions provided in your embroidery machine documentation.

CHAPTER 10
MONOGRAMMING TUTORIAL

With BERNINA Embroidery Software, it is very easy to create monograms for a variety of purposes. The Monogramming feature integrates the three basic elements of a monogram – lettering, ornaments and borders. In this tutorial you will use the Monogramming tool and discover how to create simple and elegant monograms in a fraction of the time it takes to manually digitize the same design.

Monogram designs are often used for stitching on a variety of fabrics such as toweling, linen, satin, and velvet among others. You will learn how to set the fabric type to ensure a quality stitchout. At the end we check the stitching sequence to make sure thread color changes are minimized. The tutorial can be completed with BERNINA EditorPlus or BERNINA DesignerPlus.

Note All steps required to complete the quick-start project are provided here. For further information, however, you are referred to the Onscreen Manual.

Getting started

Use Art Canvas to load, edit and save pictures as a backdrop for embroidery digitizing.

Use Embroidery Canvas mode to create and edit embroidery designs. Show embroidery shapes as well as graphics. View designs realistically in Artistic View.

Use Load Picture (Image toolbar) to load an image for use as a digitizing backdrop.

For the purposes of this tutorial, our design is to be stitched at the ends of a linen table runner measuring approximately 40 cm (15.75") in width. The design itself will measure approximately 140 mm x 140 mm (5.5") and will be stitched in the center at both ends of the table runner. We'll need to choose a suitable hoop to hold the design.

Note While this design requires no artwork to begin digitizing, the final result is located in the 'Tutorials' folder. You may want to view the completed project file before and/or after completing the tutorial. See also Working with design files.

To get started

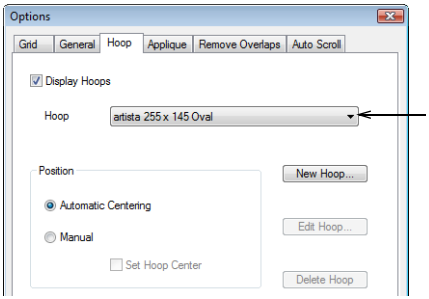
1. Double-click the BERNINA Embroidery Software shortcut icon on the MS Windows® desktop.

   BERNINA Embroidery Software opens with a new, blank design (Design1) with the default hoop selected.

2. Choose **Embroidery Canvas** mode.

3. Right-click the **Show Hoop** icon.

   The **Options > Hoop** dialog opens.



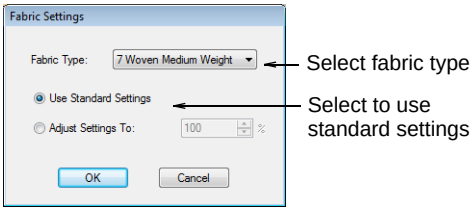
4 Select 'artista 255 x 145 Oval' from the **Hoop** list.

5 Click **OK**.

Tip Once you have selected a hoop you can toggle it on or off by clicking the **Show Hoop** icon.

6 Select **Settings > Fabric Settings**.

The **Fabric Settings** dialog opens.



7 Select 'Woven Medium Weight' from the **Fabric Type** list.

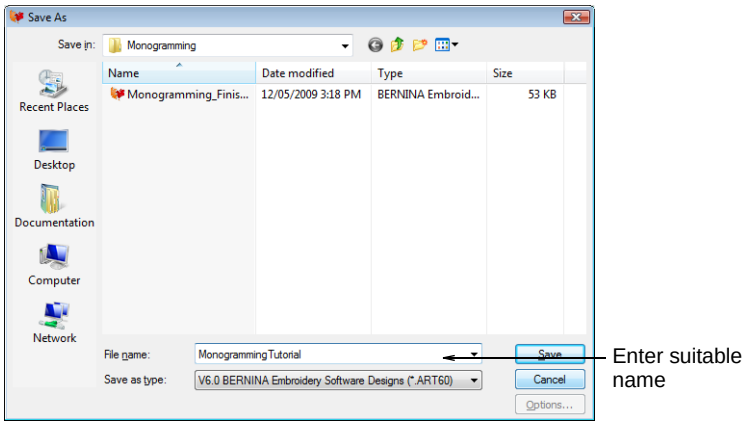
8 Accept the standard settings and click **OK**.

Stitch settings are adjusted according to the fabric selected, in this case, linen.

Tip When stitching out you will also need a suitable backing to stop gaps from forming. Two pieces of tear-away backing are recommended for use with linen.

9 Select **File > Save As**.

The **Save As** dialog opens.



10 Navigate to the **My Designs - Embroidery Software 6** folder and select the **Tutorials > Monogramming** folder.

11 Enter a suitable name – e.g. 'MonogrammingTutorial' – in the **File Name** field and click **Save**.

Tip Subsequently, you only have to click the **Save** button or **Ctrl+S** to save any changes.

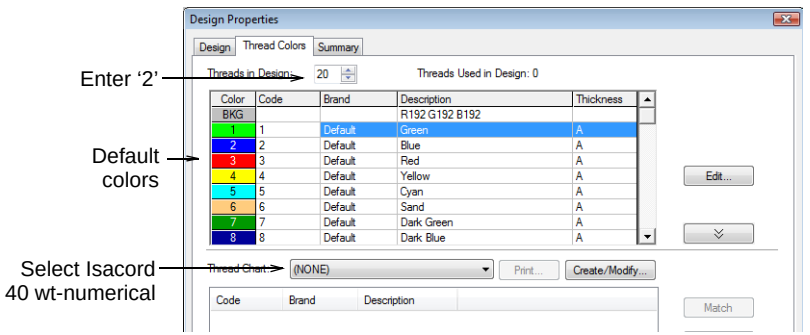
Setting up the color palette

When we open a new design, a default color palette is available for use. These colors, however, do not correspond to actual threads in a commercial thread chart. It is best to set up our color palette before we begin and select among available threads. We will be using two colors in our monogram design. See Assigning thread colors in the Onscreen Manual for details.

To set up the color palette

1 Select **Settings > Thread Colors** or click the link in the **Color Palette** dialog.

The **Design Properties > Thread Colors** dialog opens. All colors in the current design appear in the **Threads in Design** panel.

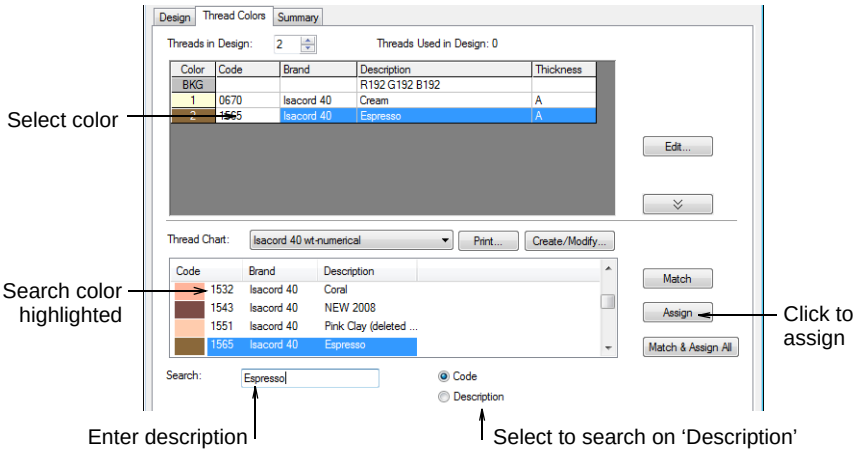


2 In the **Threads in Design** field, enter '2' and click **Apply**.

You should now have only two colors in the **Threads in Design** list.

3 Select the first color in **Threads in Design** list.

4 Select 'Isacord 40 wt-numerical' from the **Thread Chart** list.



5 Scrolling down the **Thread Chart**, select the threads to use in the project:

- Select 'Cream' for Color 1 and double-click or click **Assign**.
- Select 'Espresso' for Color 2 and assign.

Your color palette is now ready for use.

6 Click **Apply** to accept the changes and click **OK** to close.

Creating the monogram lettering

Use Auto Underlay (General toolbar) to strengthen and stabilize embroidery designs with automatic underlay.

Use Monogramming (Digitize toolbar) to create personalized monograms using a selection of pre-defined monogramming styles, border shapes and ornaments.

Click Reshape Object (Edit toolbar) to view the reshape nodes of a selected object.

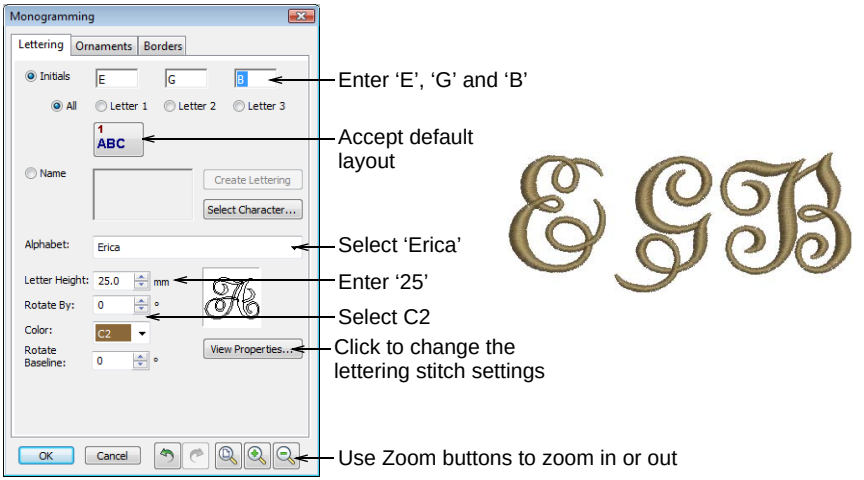
The **Monogramming** dialog has three tabs – **Lettering**, **Ornaments** and **Borders**. In this tutorial we will use all three types of monogramming element. Whether you are making a single, 2-letter or conventional 3-letter monogram, you will need to select an appropriate alphabet and color. With a 2- or 3-letter monogram, you can also select a special layout that will save you a lot of time. See Creating monogramming designs in the Onscreen Manual for details.

To create the monogram lettering

1 Click the **Auto Underlay** icon to apply underlay to new objects automatically.

2 Click the **Monogramming** icon.

The **Monogramming** dialog opens with the **Lettering** tab selected. The **Initials** option is selected by default.



3 Select C2 in the **Color** field.

4 Enter the initials ‘E’, ‘G’, and ‘B’ in the three fields provided.

The letters instantly appear the Design Window.

Tip Use the **Zoom** controls at the bottom to better view your design. The current zoom factor is shown in the **Status Bar** on the right. See Zooming and panning for details.

5 Select ‘Erica’ in the **Alphabet** list.

If ‘Erica’ is not available in your product level, choose another script alphabet such as ‘Empress’ or even ‘Times Roman’.

6 Enter 25 mm (1.0") in the **Letter Height** field.

Notice that the letter ‘E’ is spaced a little too far from the other letters.

7 Click **OK**.

8 Click the **Reshape Object** icon. See Adjusting spacings in the Onscreen Manual for details.

Control points appear around the lettering object.

9 Click and drag the diamond handle in the letter 'E' to close the gap.

10 Press **Esc** to finish.

Adding the ornaments

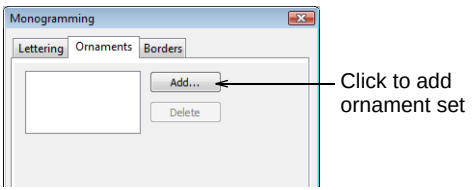
We will enhance our 3-letter monogram by adding ornaments. BERNINA Embroidery Software contains a selection of ornaments created especially for monograms. See also Adding ornaments to monograms in the Onscreen Manual.

To add the ornaments

1 Double-click or right-click the monogram design.

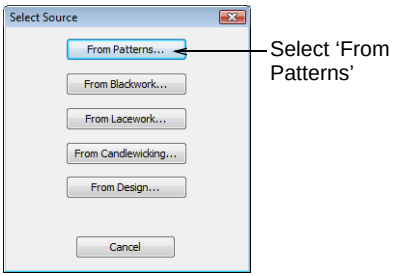
The **Monogramming** dialog opens with the **Lettering** tab selected.

2 Select the **Ornaments** tab.



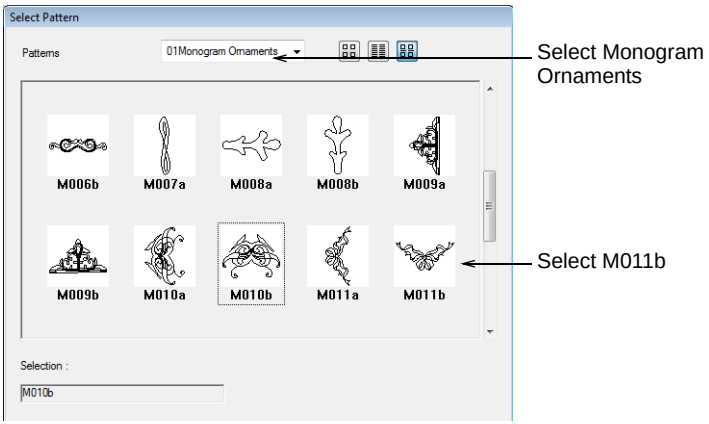
3 Click the **Add** button.

The **Select Source** dialog appears.



4 Click the **From Patterns** button.

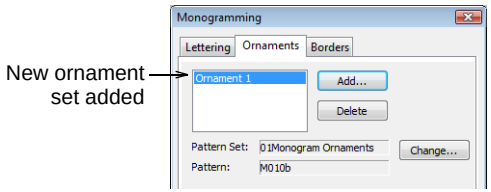
The **Select Pattern** dialog appears.



5 In the **Patterns** list, select 'Monogram Ornaments'.

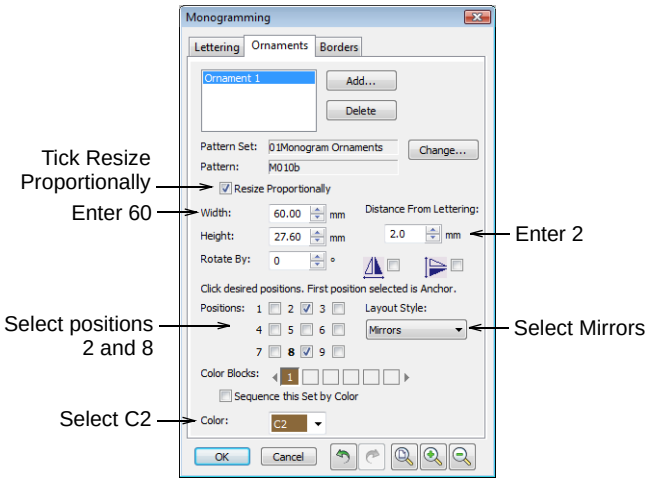
6 Select 'M011b' and click **OK** to accept.

New ornament set is added to the list box.



7 Select positions 8 and 2, in that order.

Other options become available and the design is updated automatically.



8 Adjust ornament settings as follows:

- Width: 60 mm (2.4") – the **Resize Proportionally** checkbox must be ticked.
- Distance from Lettering: 2.0 mm
- Layout Style: Mirrors

See also Creating multi-ornament layouts in the Onscreen Manual.

Tip The height field automatically updates proportionally to width.

9 Click **OK**.

Tip Use the **Zoom** controls at the bottom to better view your design. The current zoom factor is shown in the **Status Bar** on the right. See Zooming and panning for details.

Adding the borders

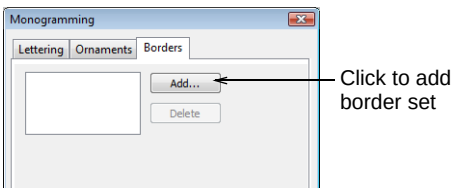
We want to enhance our design with two border elements. One will be a fill and one will be an outline. See also Adding borders to monograms in the Onscreen Manual.

To add the borders

1 Double-click or right-click the monogram design.

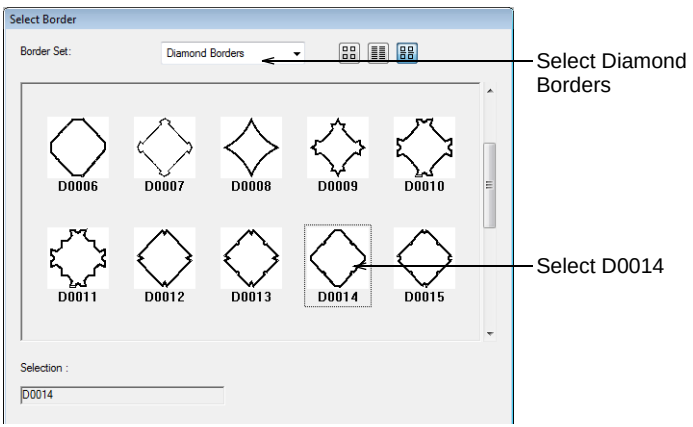
The **Monogramming** dialog opens with the **Ornaments** tab selected.

2 Select the **Borders** tab.



3 Click the **Add** button.

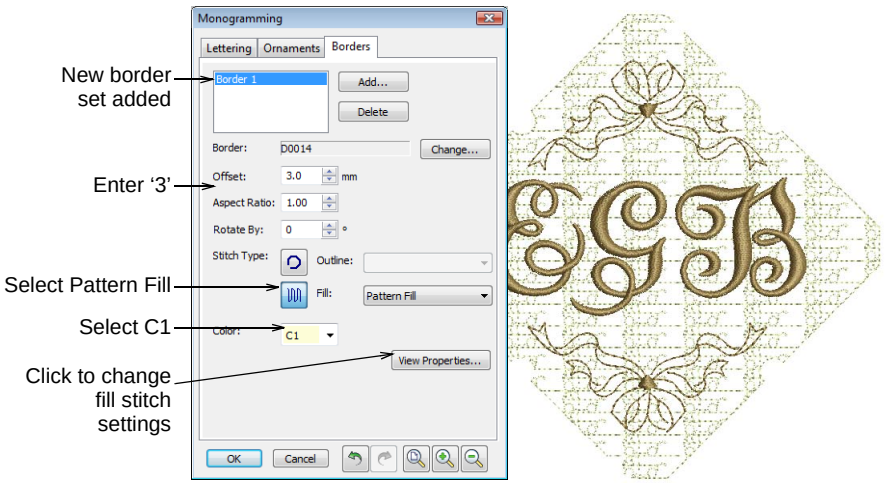
The **Select Border** dialog appears.



4 In the **Patterns** list, select 'Diamond Borders'.

5 Select ‘D0014’ and click **OK**.

A new border set is created using the selected border and a new entry added to the list box.



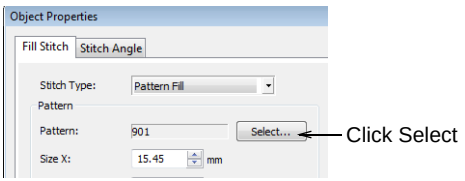
6 Adjust border settings as follows:

- Offset: 3.0 mm (0.12")
- Color: C1.

7 Click the **Fill** icon and select ‘Pattern Fill’ from the dropdown list.

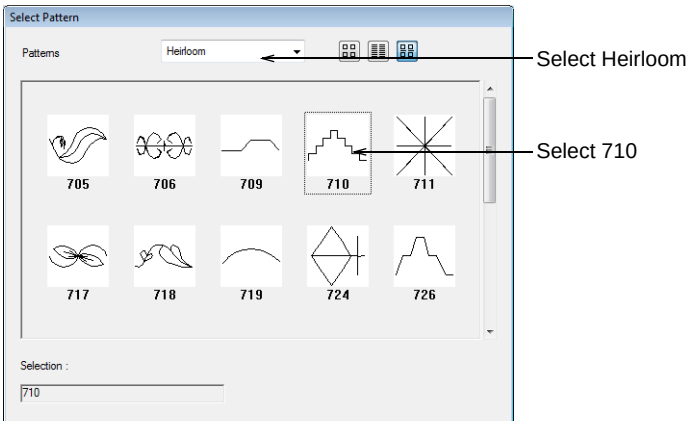
8 Click the **View Properties** button.

The **Object Properties > Fill Stitch** dialog opens.



9 Click the pattern **Select** button.

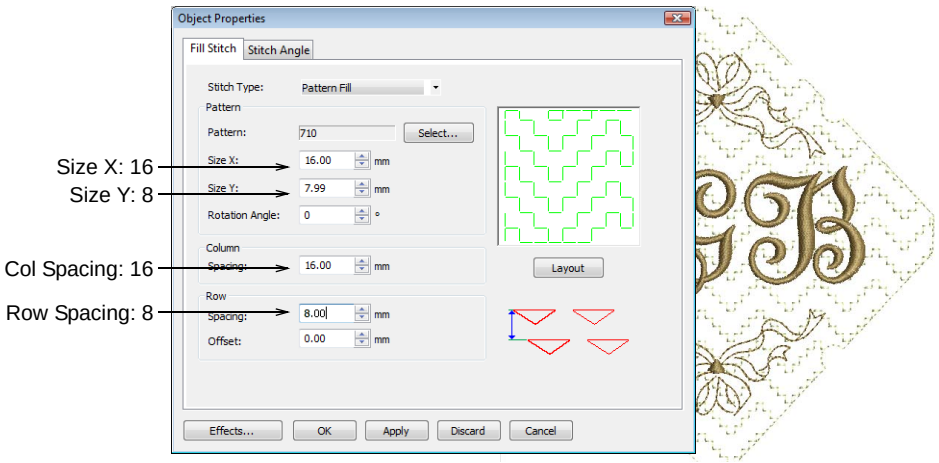
The **Select Pattern** dialog opens.



10 In the **Patterns** list, select 'Heirloom'.

11 Select '710' and click **OK**.

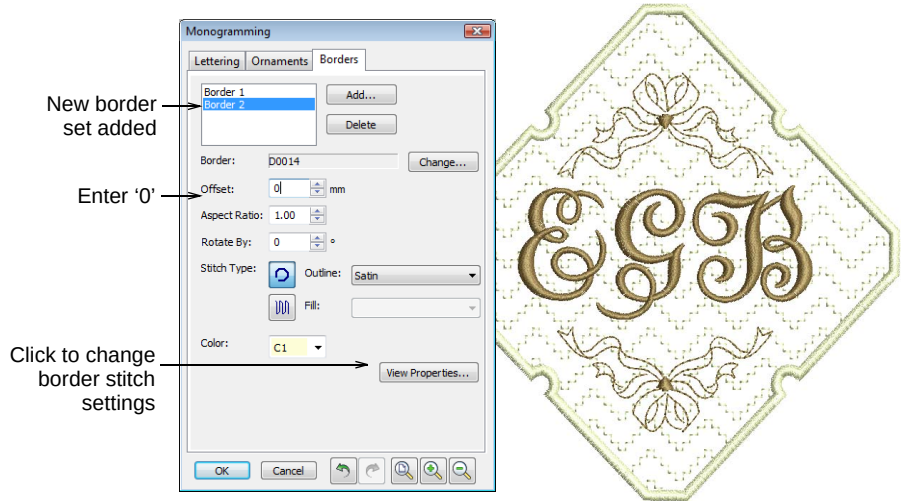
12 In the **Object Properties** dialog accepting the changes.



Tip Use the **Zoom** controls at the bottom to better view your design. The current zoom factor is shown in the **Status Bar** on the right. See Zooming and panning for details.

13 Click **Add**.

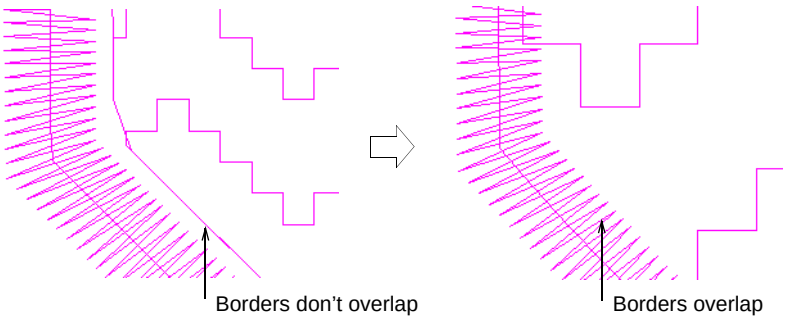
A new Satin border is created using current settings.



Note The new Satin border does not fully cover the edge of the existing filled border and also looks a little thin. We will need to adjust the offset and border width.

14 Change the offset to 0 mm.

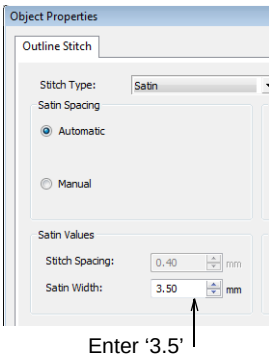
The Satin border now overlaps filled border.



Tip Switch to Stitch View and use the **Zoom** tools to study the area where the two borders overlap. Make sure there is a sufficient overlap to cover the edge of the filled border. See also Zooming and panning.

15 Click the **View Properties** button.

The **Object Properties > Fill Stitch** dialog opens.



16 Enter '3.5' in the **Satin Width** field and click **OK**.

We have completed our simple but elegant monogram design in a few simple steps.

Finalizing the design

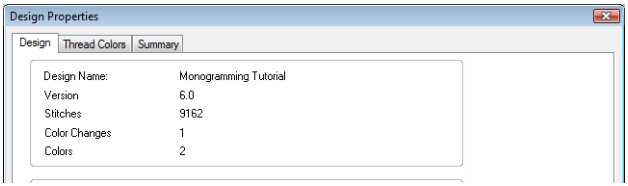
We're now almost ready to output our design but first we'll carry out a final check of the design properties to study how our design will stitch out. We'll also view the design against a background fabric to get a better idea of how it will look.

Tip Save your design frequently so you don't lose your work in the event of a power or system failure. See also Saving designs.

To finalize the design

1 Select **File > Design Properties**.

The **Design Properties > Design** dialog opens. The **Design** tab contains information about height and width and stitch count and colors. The data is extracted from the design and cannot be modified.



2 Observe the following details:

- Stitch count: approx. 9,200 stitches
- Color changes: 1
- Colors: 2.

Note We have two colors and only one color change. This means that the stitching sequence has been automatically optimized for the most efficient stitchout.

3 Click **OK**.

4 In Stitch View, select **View > Slow Redraw** or press **Shift+R**.

The **Slow Redraw** dialog opens.

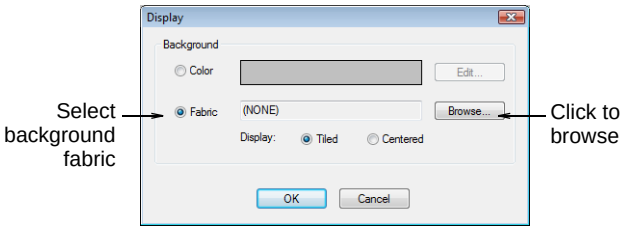
5 Click the **Go** button.

The design will stitch out on your machine exactly as you see it here. See Outputting Designs in the Onscreen Manual for details.

Note Lettering underlay has been applied automatically.

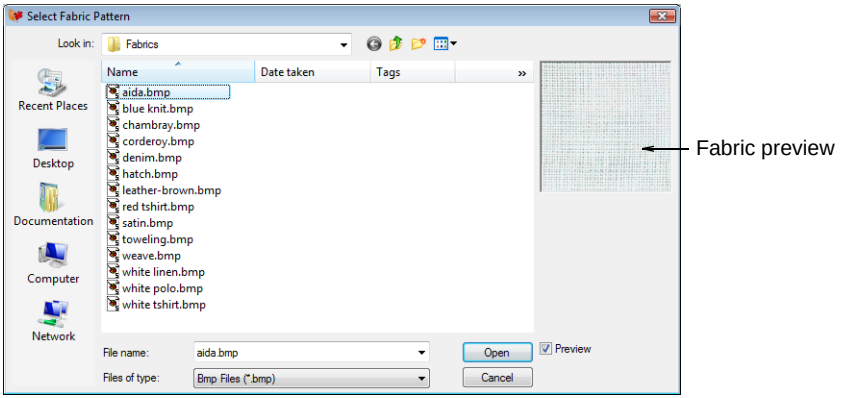
6 Select **Settings > Fabric Display**.

The **Fabric Display** dialog opens.



7 Select the **Fabric** button and click **Browse**.

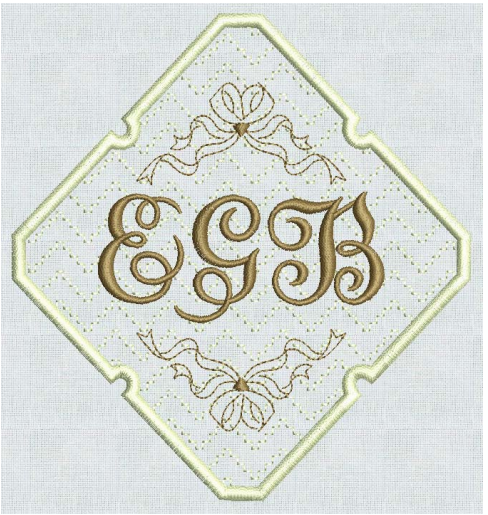
The **Load Picture** dialog opens. Fabrics are all located in the C:..\Program Files\BERNINA\Embroidery Software 6\Fabrics folder.



8 Select 'Aida' from the fabrics folder and click **Open**.

Note We use Aida for appearance only to create the impression of linen fabric onscreen.

9 Click **OK**.

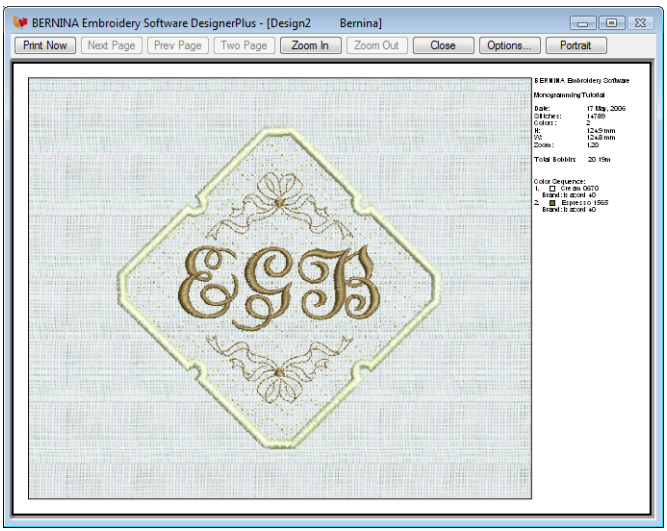


10 Save your design. See also Saving designs.

Tip The final result of this project is located in the 'Tutorials' folder. You may want to compare it at this point with your own completed design.

11 Click the **Print Preview** icon.

The design displays as it will be printed. See Printing designs in the Onscreen Manual for details.



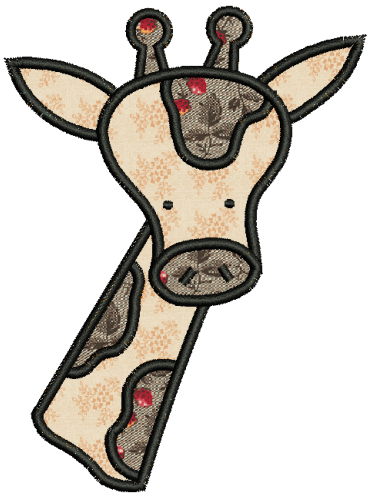
12 Change printing options by clicking the **Options** button. See Setting print options for embroidery in the Onscreen Manual for details.

Note Large designs may be displayed over a number of pages if printed at actual size. Use **Next Page**, **Previous Page** or **Two Pages** to view multiple pages.

13 Click **Close** to exit the print preview.

14 Use **Write to Machine** to send your design directly to your BERNINA home embroidery machine ready to stitch. See Stitching out designs in the Onscreen Manual for details. See also detailed instructions provided in your embroidery machine documentation.

CHAPTER 11
APPLIQUÉ TUTORIAL



Expand your creative potential with appliqué. BERNINA Embroidery Software has a wide selection of fabrics to use in appliqué projects to help you visualize designs onscreen. In this tutorial you will learn how to implement the open-object appliqué technique in digitizing the giraffe artwork included in your software installation. Tips, hints and suggestions provided here will help you along the way in understanding the techniques used to create professional-looking appliqué with your BERNINA home embroidery machine.

We will begin by inserting a digitizing backdrop. We'll then digitize the cover stitching and check the object sequence. We'll then use the Advanced Appliqué tool to generate the necessary stitching. We'll also select from a range of fabrics and apply them to the design. The tutorial can be completed with BERNINA DesignerPlus.

Note All steps required to complete the quick-start project are provided here. For further information, however, you are referred to the Onscreen Manual.

Getting started

Use Art Canvas to load, edit and save pictures as a backdrop for embroidery digitizing.

Use Embroidery Canvas mode to create and edit embroidery designs. Show embroidery shapes as well as graphics. View designs realistically in Artistic View.

Use Load Picture (Image toolbar) to load an image for use as a digitizing backdrop.

Click Show Hoop (General toolbar) to view the hoop. Right-click to change settings.

For the purposes of this tutorial, the design is intended for a baby bib approximately 190 mm x 200 mm (7.48" x 7.87"). It is to be stitched on medium weight cotton Terry Towling. When we insert the artwork, we'll resize it to fit these dimensions. We'll then choose a suitable hoop to hold the design. As our starting point, we're going to use one of the sample designs packaged with the software.

Tip Your BERNINA Embroidery Software comes with a range of artwork and embroidery designs that you can use as a starting point for your own projects. In addition to the packaged sample designs, you will find a dedicated 'Tutorials' folder which contains all the files you need to complete this and other tutorials. The final result of this and other projects is also located in this folder. You may want to view the completed project file before and/or after completing the tutorial. See also Working with design files.

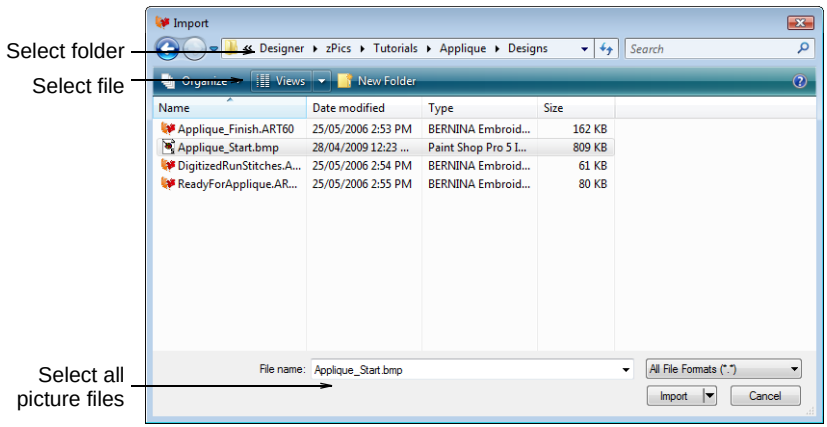
To get started

1 Double-click the BERNINA Embroidery Software shortcut icon on the MS Windows® desktop.

BERNINA Embroidery Software opens with a new, blank design (Design1) with the default hoop selected.

2 Switch to **Art Canvas** mode and click the **Load Picture** icon.

The **Import** dialog opens.

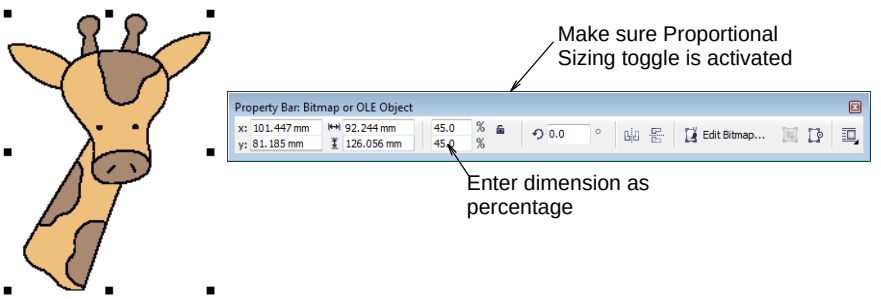


3 Navigate to the **My Designs - Embroidery Software 6** folder and select the **Tutorials > Applique** folder.

4 Select the 'Applique_Start.BMP' file and click **Import**.

5 Press **Enter** to center the imported artwork on the page.

Notice that the image is approximately 205 mm x 280 mm (8.07" x 11.02").



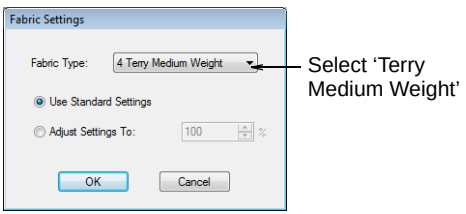
6 Enter '45' into **Width** percentage field and, making sure **Proportional Sizing** toggle is activated, press **Enter**.

The image is reduced to 45% of the original size – approximately 92 mm x 126 mm (3.62" x 4.96").

7 Switch to **Embroidery Canvas** and press **Esc** to deselect artwork.

8 Select **Settings > Fabric Settings**.

The **Fabric Settings** dialog opens.



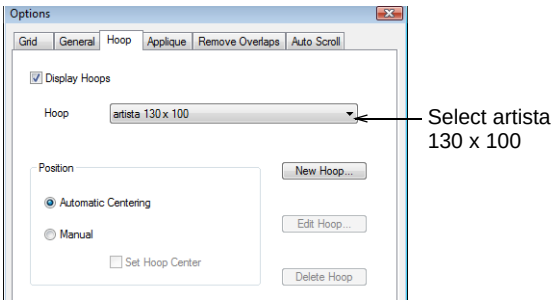
9 In the **Fabric Type** dropdown list select 'Terry Medium Weight'.

10 Accept the standard settings and click **OK**.

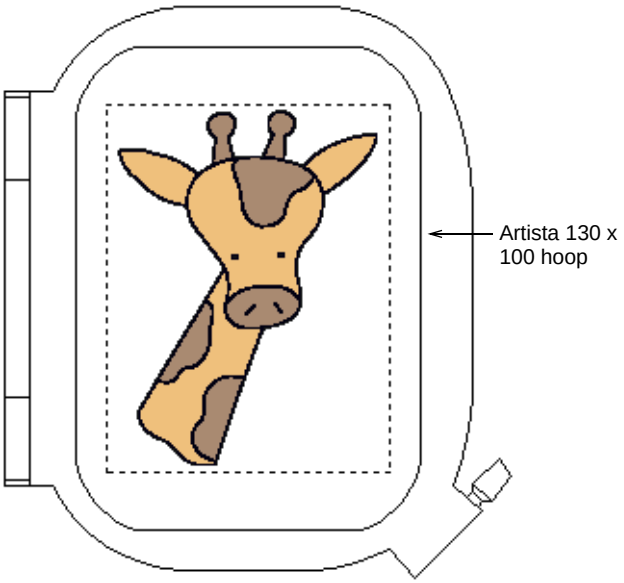
These fabric settings will be applied to all newly created objects in the design.

11 Right-click the **Show Hoop** icon.

The **Options > Hoop** dialog opens.



12 Select 'artista 130 x 100' from the **Hoop** list and click **OK**.

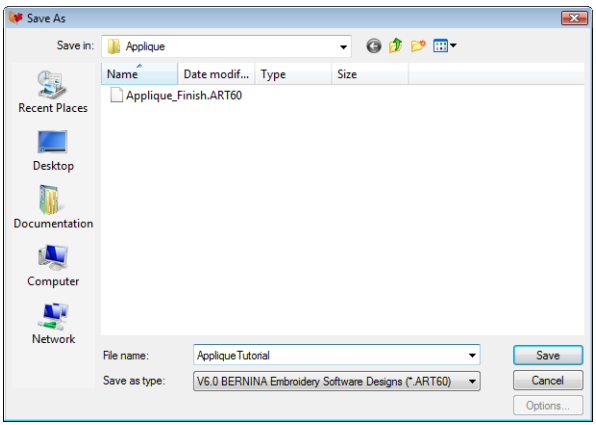


13 Zoom out to better view the hoop – select the **Zoom Box** tool and right-click the design once.

Tip Once you have selected a hoop you can toggle it on or off by clicking the **Show Hoop** icon. See Displaying the hoop in the Onscreen Manual for details.

14 Select **File > Save As**.

The **Save As** dialog opens.



Tip The **Save As** dialog opens to the same location where the original file is stored.

15 Enter a suitable name – 'AppliqueTutorial' – in the **File name** field.

16 Click **Save**.

Tip Subsequently, you only have to click the **Save** button or **Ctrl+S** to save any changes.

Digitizing the cover stitches

Use Open Object (Digitize toolbar) to digitize open shapes.

Use Closed Object (Digitize toolbar) to digitize irregular closed shapes.

In this tutorial, we will use the imported artwork as a guide while we manually digitize the objects that will make up the cover stitching of the appliqué. For the purposes of this design, we will be using the special **Advanced Appliqué** tool which allows us to generate 'open-object appliqué' from one or more source or 'primary' objects. These objects form the cover stitching of the resulting appliqué. There is a specific order in which we must stitch the objects so that the intersecting objects together form 'allowable boundaries':

- Ears and horns

- Forehead piece
- Neck patches
- Neck, face, and nose
- Eyes and nostrils.

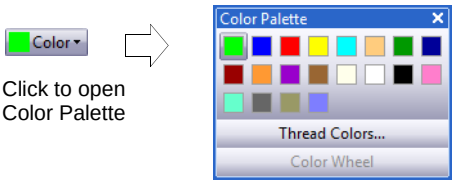
We will digitize these objects using default green single run stitches in order to visualize the stitches in Stitch View more clearly. The stitches will be converted to black Satin once all objects comprising our cover stitching are complete. See also Digitizing Methods in the Onscreen Manual.

Tip Before proceeding with manual digitizing, it's a good idea to familiarize yourself with the concept of reference points and reshape nodes in BERNINA Embroidery Software. See Digitizing tools for details.

To digitize the cover stitches

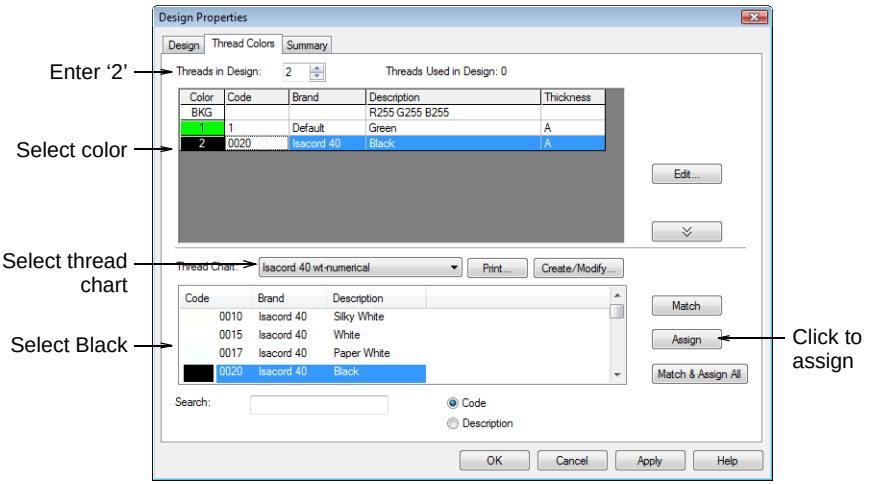
1 Click the **Color** icon.

The **Color Palette** opens.



2 Click the **Thread Colors** link.

The **Design Properties** dialog opens with the **Thread Colors** tab active. The colors in the current design appear in the upper **Threads in Design** panel.



3 Enter '2' in the **Threads in Design** field.

4 Select C2 in the **Threads in Design** panel.

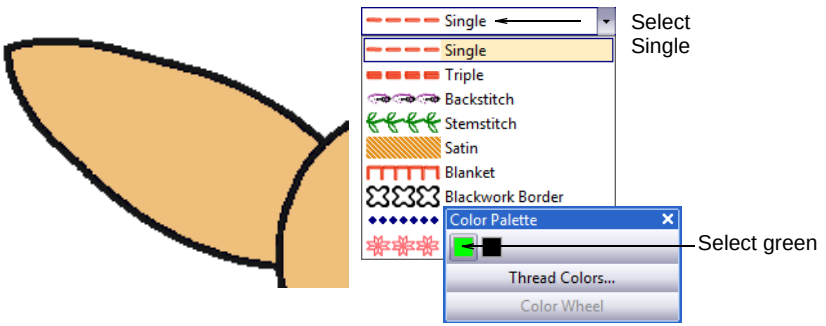
Note We will retain the first color – default green – for digitizing over the artwork. The artwork has black outlines and the green color will make it easier to see what we are doing.

5 Select 'Isacord 40 wt-numerical' from the **Thread Chart** list.

6 In the thread chart list, select 'Black' and double-click or click **Assign**.

7 Click **Apply** to accept the changes and click **OK** to close.

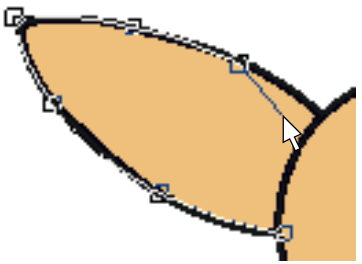
8 Press **B** on the keyboard and drag a zoom box around the giraffe's left ear. See Zooming and panning for details.



9 Select **Single** from the **Outline** stitch type list. See Selecting or changing stitches in the Onscreen Manual for details.

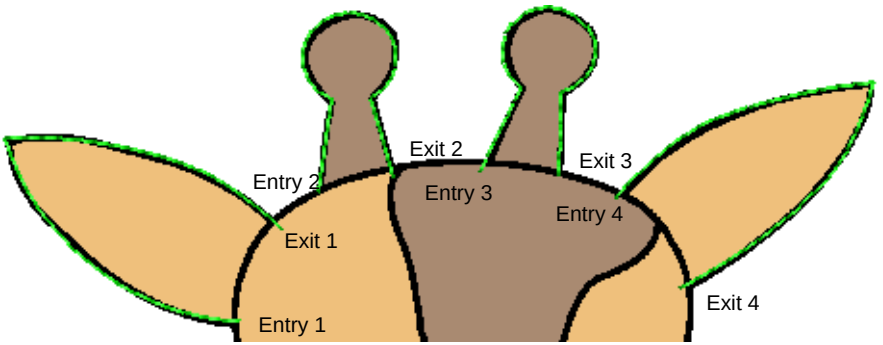
10 Click the **Color** icon and select C1 (Default Green) from the **Color Palette**. See Changing current colors in the Onscreen Manual for details.

11 Click the **Open Object** tool and digitize the left ear – left-click for corner points and right-click for curve points. See Digitizing open shapes in the Onscreen Manual for details.



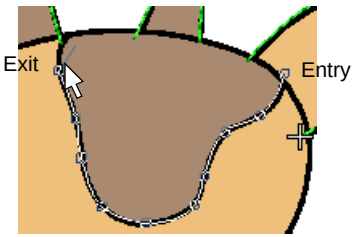
Tip Using the artwork as a guide, make sure the entry and exit points of the ear shape overlap the head outline, otherwise, the whole will not be converted to an Advanced Appliqué object. See Creating open-object appliqué design in the Onscreen Manual for details.

12 Digitize the left horn, right horn and then right ear in the same manner, as shown.



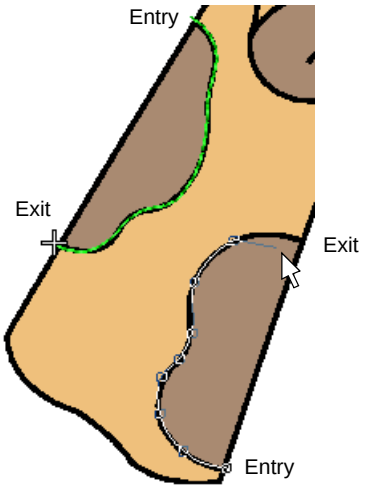
Tip While you should digitize the objects in the order shown, it is not essential to digitize entry and exit points in any particular order as long as the **Apply Closest Join** (the default) option is activated. This method automatically calculates the closest join between objects while digitizing. See Setting other general options for details.

13 Click the **Open Object** tool and digitize the forehead patch starting from the right-hand side.

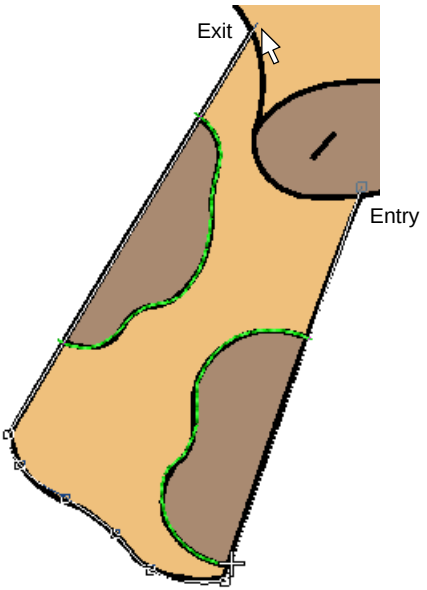


Note Again, make sure the entry and exit points overlap the head outline.

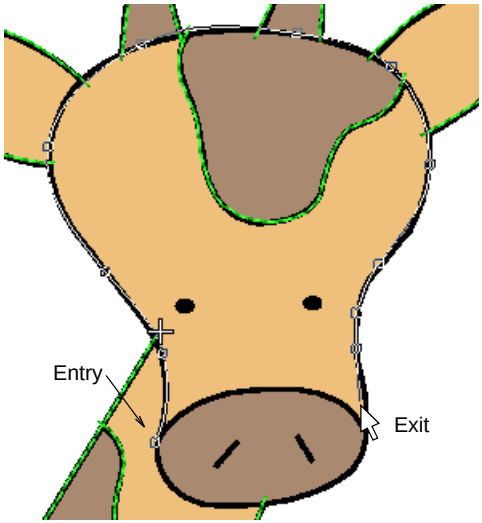
14 Now digitize the neck patches as shown, first the left side, then the right.



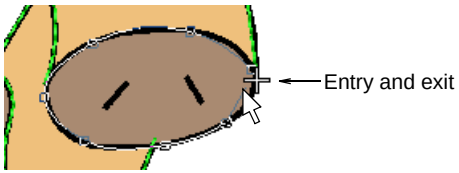
15 Next, digitize the neck.



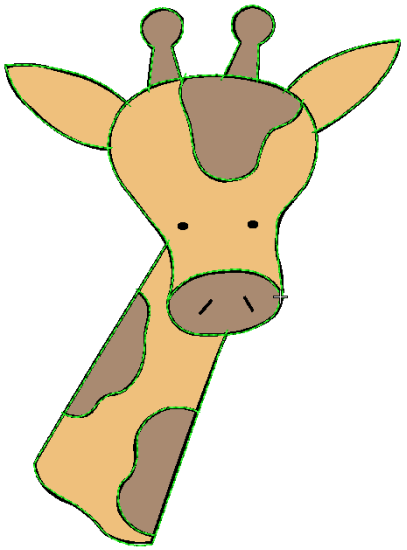
16 Now digitize the face.



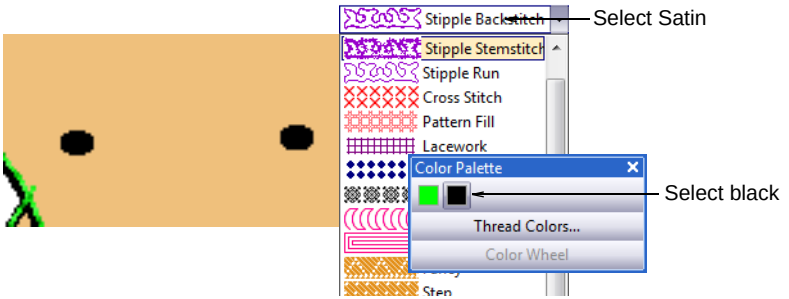
17 Click the **Closed Object** tool and digitize the nose as shown. See Digitizing closed shapes in the Onscreen Manual for details.



18 Press **0** (zero) to see all digitized run stitches.



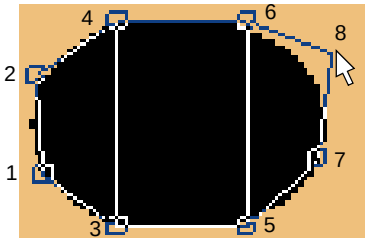
19 Press **B** on the keyboard to click and drag a zoom box around the eyes. See Zooming and panning for details.



20 Select **Satin** from the **Fill** stitch type list. See Selecting or changing stitches in the Onscreen Manual for details.

21 Click the **Color** icon and select C2 (Black) from the **Color Palette**. See Changing current colors in the Onscreen Manual for details.

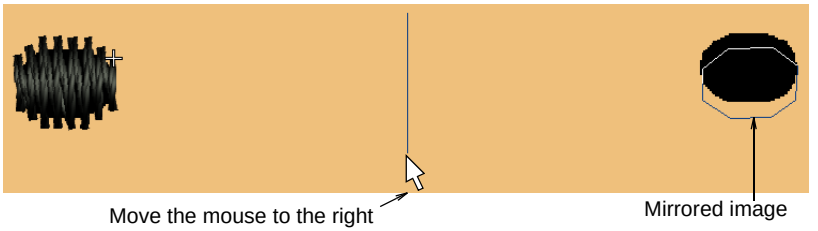
22 Select the **Block Digitizing** tool.



23 Digitize the left eye by marking reference points on alternate sides. See Digitizing columns of varying width in the Onscreen Manual for details.

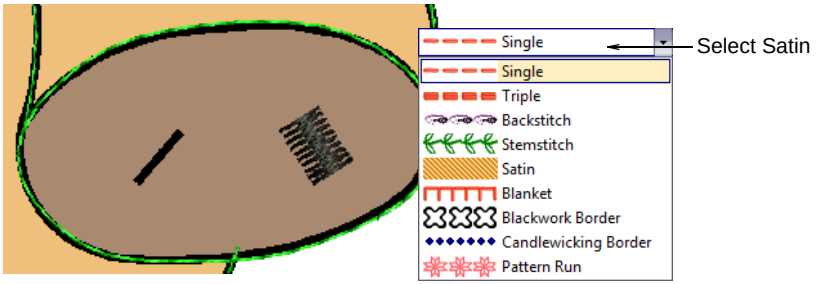
24 Press **Esc** to deselect the tool and select the eye object.

25 Click the **Mirror-Merge Horizontal** icon. See Mirror-merging objects in the Onscreen Manual for details.



26 Move the mouse to the right until the duplicate is positioned above the right eye of the image and click to complete.

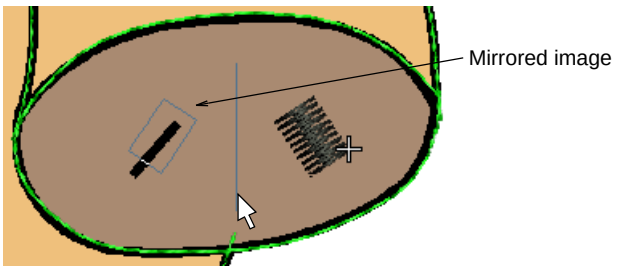
27 Zooming in on the nose area, select **Satin** from the **Outline** stitch type list.



28 Using the **Open Object** tool, digitize the right nostril. See Creating Satin outlines in the Onscreen Manual for details.

29 Press **Esc** to deselect the tool and select the nostril object.

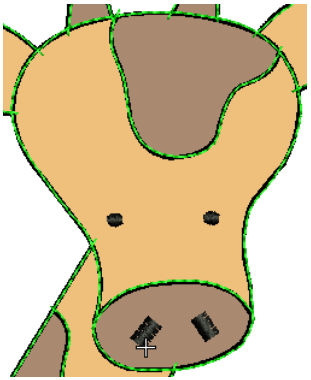
30 Use the **Mirror-Merge Horizontal** tool to create the other nostril.



Note The nostril is rather thick – we'll adjust the width later.

31 Move the mouse to the left until the duplicate is positioned above the left nostril of the image and click to complete.

32 Press **0** (zero) to see all digitized objects.



Editing the results

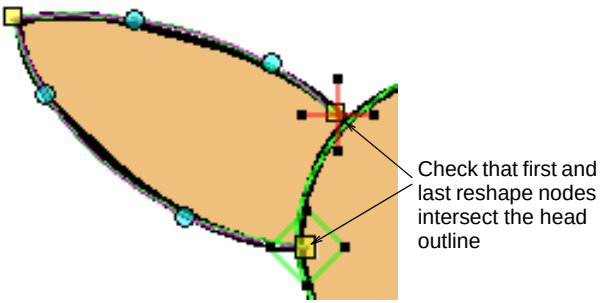
Click Reshape Object (Edit toolbar) to view the reshape nodes of a selected object.

Before we can apply Advanced Appliqué to our cover stitching, we need to check the objects carefully to make sure that all boundaries overlap. We'll also change the stitch color to black and stitch type to Satin for the final cover stitching.

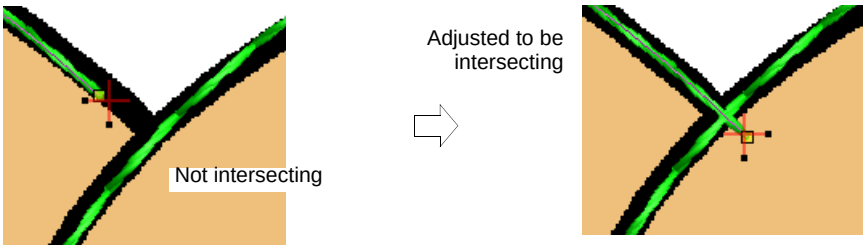
To edit the results

1 Select the left ear and click the **Reshape Object** icon.

Reshape nodes appear around the object. See Reshaping objects using reshape nodes in the Onscreen Manual for details.



2 Click the **Zoom Box** icon or press **B** on the keyboard to click and drag a zoom box around the giraffe's left ear.



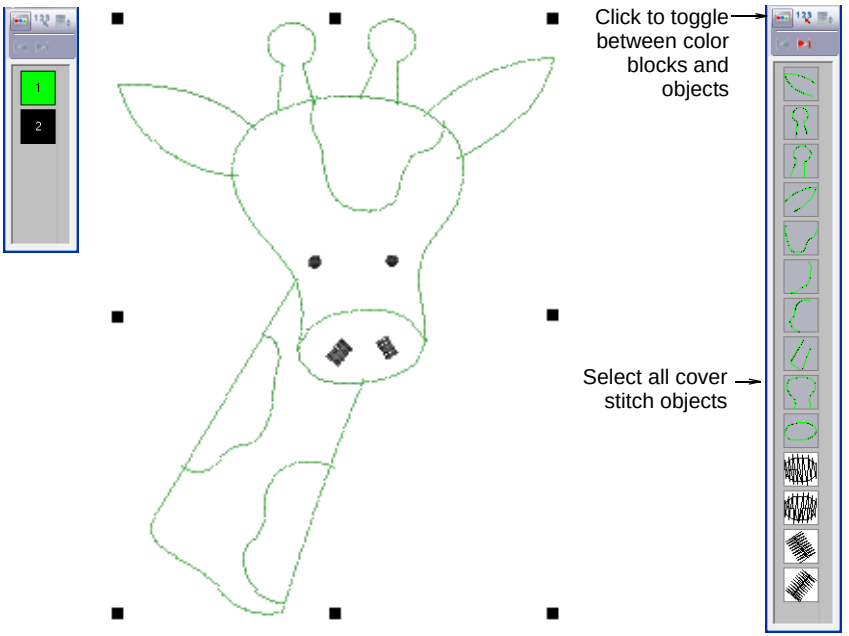
3 Check that the first and last reshape nodes intersect the head outline:

- Click and drag the red cross exit point out of the way.
- Click and drag the reshape nodes to intersect if necessary.
- Drag the exit point back to its original position.

4 Repeat the same for all other joins.

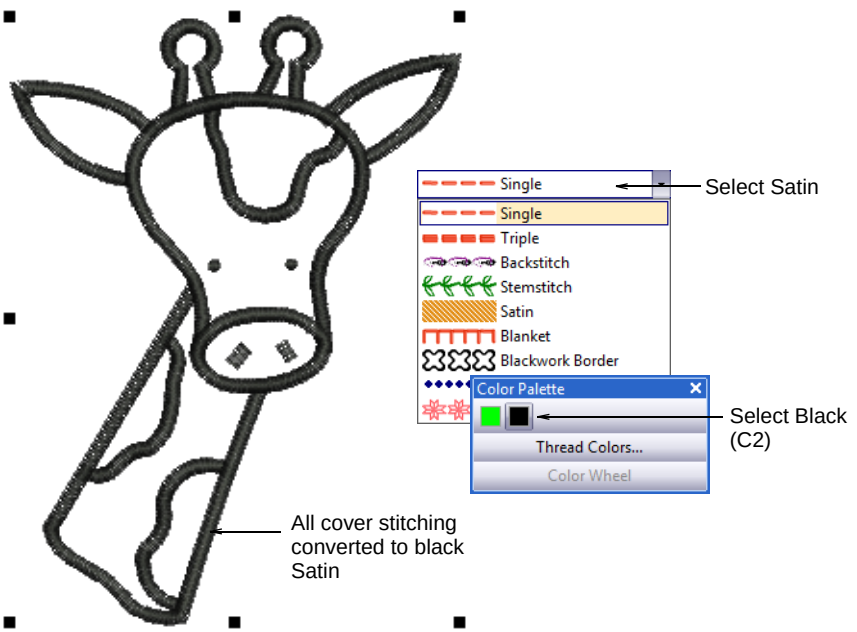
Note You will find a design file in your tutorial folder completed to this point in the tutorial. You may open it to compare it with your work. The filename is 'DigitizedRunStitches'.

5 Click the **Color Film** icon and click the **Show Individual Objects** toggle. See Viewing and selecting color blocks for details.



Tip For a better view, toggle the **Show Pictures** icon off.

6 Click the first object in the list, and holding down the **Shift** key, click the last green object.



7 Select **Satin** from the **Outline** stitch type list. See Selecting or changing stitches in the Onscreen Manual for details.

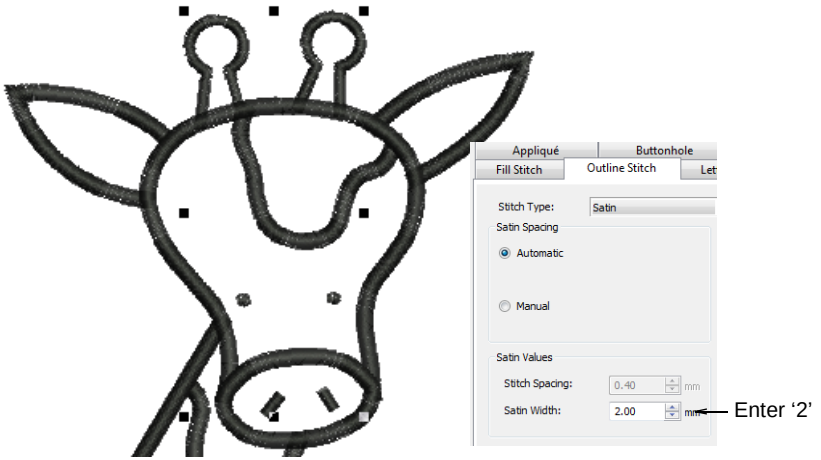
8 Click the **Color** icon and select C2 (black) from the **Color Palette**. See Changing current colors in the Onscreen Manual for details.

All cover stitching for the appliqué is now black satin. However, the horn and the nostril objects are too thick.

9 Press **Esc** to deselect everything.

10 Select the horns and nostrils and double-click or right-click.

The **Object Properties > Outline Stitch** dialog opens.



11 Enter 2 mm in the **Satin Width** field and click **Apply**.

Tip You will find a design file in your tutorial folder completed to this point in the tutorial. You may open it to compare it with your work. The filename is 'ReadyForApplique'.

Creating open-object appliqué

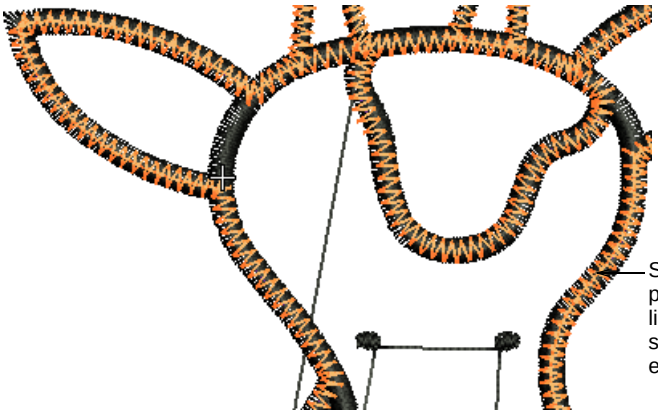
Use Advanced Appliqué (Digitize toolbar) to generate open-object appliqué from one or more source objects.

Open-object appliqué is generated from one or more source or 'primary' objects. Several types of primary object can be used, including any outline stitch type – Single Run, Satin Outline, etc – any closed or block-digitized object. When open-object appliqué is created, 'secondary objects' are generated to hold down fabric patches. These may include some or all of the following:

- **Placement lines**: These are, optionally, the first appliqué layer to be stitched. Placement lines are used to position pre-cut appliqué patches on the background material.
- **Cutting lines**: Again optionally, cutting lines form a guide when trimming the fabric of an appliqué patch 'in situ'.

- **Tackdown**: This is a zigzag stitch placed after placement and cutting lines, and used to fix appliqué patches to the background fabric before cover stitching is applied.

Each 'boundary segment' will generate a placement line, cutting line and/or tackdown depending on current settings.



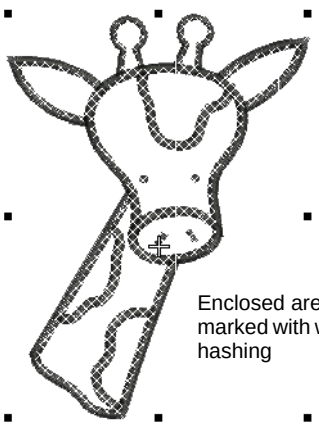
To create open-object appliqué

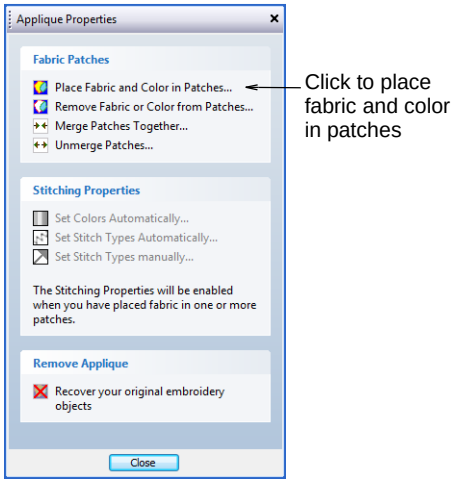
1 Select all objects except the eyes and the nostrils in the Color Film. See Viewing and selecting color blocks for details.

Caution If you saved your work and re-opened the saved file, your design will be grouped by default. You will need to ungroup it before proceeding. See Grouping and splitting objects in the Onscreen Manual for details.

2 Click the **Advanced Appliqué** icon.

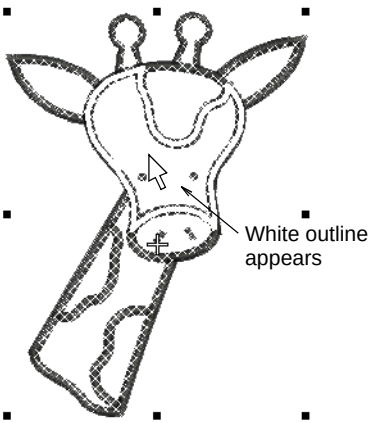
The **Appliqué Properties** dialog opens. Areas enclosed marked with hashing in white. See Creating open-object appliqué in the Onscreen Manual for details.

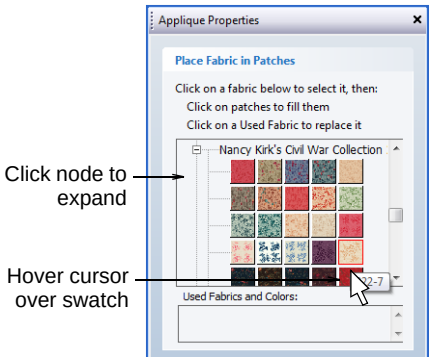



Applique Properties
Fabric Patches
Place Fabric and Color in Patches...
Remove Fabric or Color from Patches...
Merge Patches Together...
Unmerge Patches...
Stitching Properties
Set Colors Automatically...
Set Stitch Types Automatically...
Set Stitch Types manually...
The Stitching Properties will be enabled when you have placed fabric in one or more patches.
Remove Applique
Recover your original embroidery objects
Close
Click to place fabric and color in patches

3 Click the **Place Fabric and Color in Patches** option.

The dialog changes to display the **Place Fabric in Patches** panel.



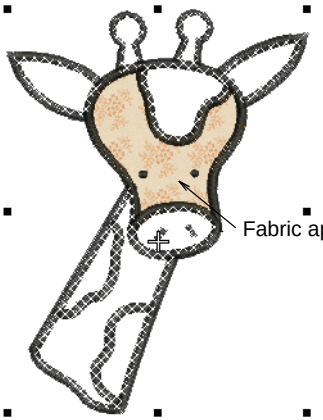

Applique Properties
Place Fabric in Patches
Click on a fabric below to select it, then:
Click on patches to fill them
Click on a Used Fabric to replace it
Nancy Kirk's Civil War Collection
Used Fabrics and Colors:
Click node to expand
Hover cursor over swatch

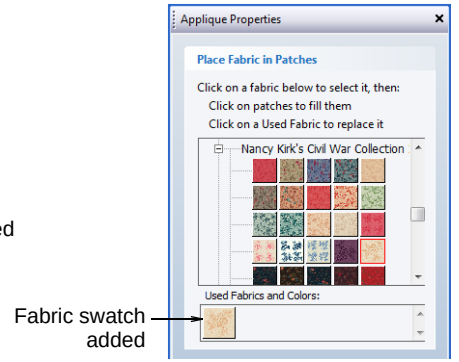
4 Click the BENARTEX node – the fabric list expands – and open the 'Nancy Kirk's Civil War Collection 2'.

5 Hover the cursor over the swatches – a tooltip shows the number – and select '322-7'.

6 Place the cursor over the giraffe's head – a white outline appears – and click.

The head is filled with the selected fabric and a swatch added to the **Used Fabrics** palette.

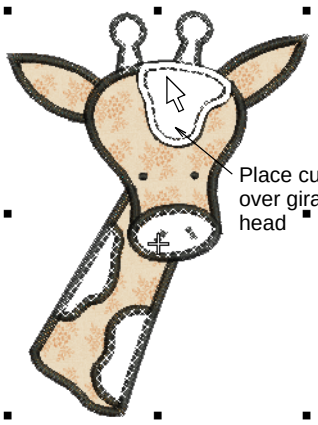


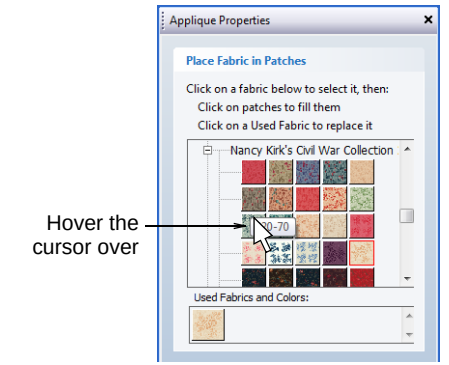

Applique Properties
Place Fabric in Patches
Click on a fabric below to select it, then:
Click on patches to fill them
Click on a Used Fabric to replace it
Nancy Kirk's Civil War Collection
Used Fabrics and Colors:
Fabric swatch added

Note Notice that the eyes appear above the fabric.

7 Repeat the same for all other light-colored areas.

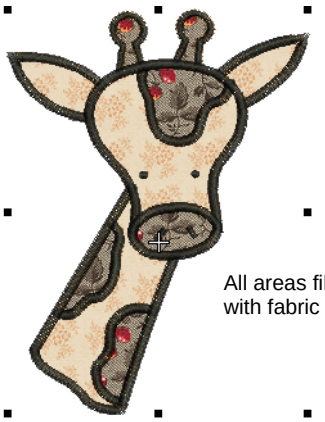
8 From the same fabric collection, select '320-70' and apply it to all the dark areas of the giraffe.




Applique Properties
Place Fabric in Patches
Click on a fabric below to select it, then:
Click on patches to fill them
Click on a Used Fabric to replace it
Nancy Kirk's Civil War Collection
Used Fabrics and Colors:
Hover the cursor over

Tip Drag and drop a fabric swatch from the fabrics tree over an entry in the **Used Fabrics** palette to replace that entry.

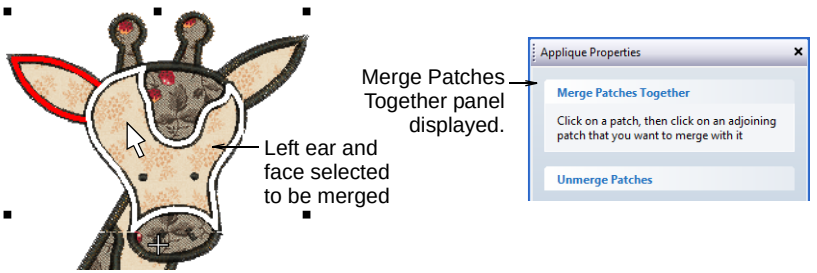
9 Click **Back** when complete.



Tip Advanced Appliqué objects can be selected and manipulated in the same way as a grouped object – i.e. they can be moved, resized, skewed or rotated, using the same click and drag method applying to all objects. Reshaping of Advanced Appliqué objects, however, is not possible. Nor is there any way to select individual objects, primary or secondary, within open-object appliqué unless the object is first broken apart. See Splitting into component objects in the Onscreen Manual for details.

10 In the root menu of the **Applique Properties** dialog, click the **Merge Patches Together** option.

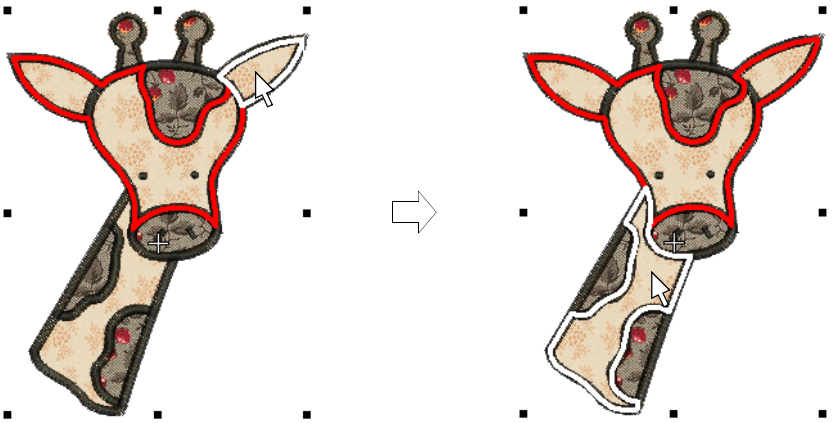
The **Merge Patches Together** panel is displayed.



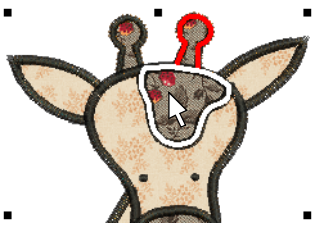
11 Click the left ear and the face – these patches are now merged.

Note You can only merge two patches at a time.

12 Do the same with the right ear and the neck.



13 For the dark patches, the forehead and the right horn can likewise be merged.



14 Click **Back** when complete.

Finalizing the design

Use Show Appliqué Fabric (General toolbar) to toggle appliqué fabrics/colors on/off.

We're now almost ready to output our design. But first we'll carry out a final check of the stitching sequence to get a better idea of how it will stitch out.

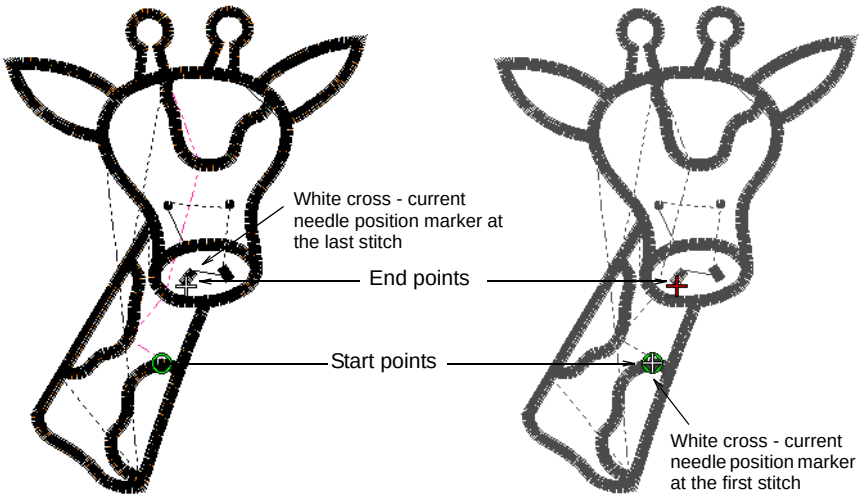
Tip Save your design frequently so you don't lose your work in the event of a power or system failure. See also Saving designs.

To finalize the design

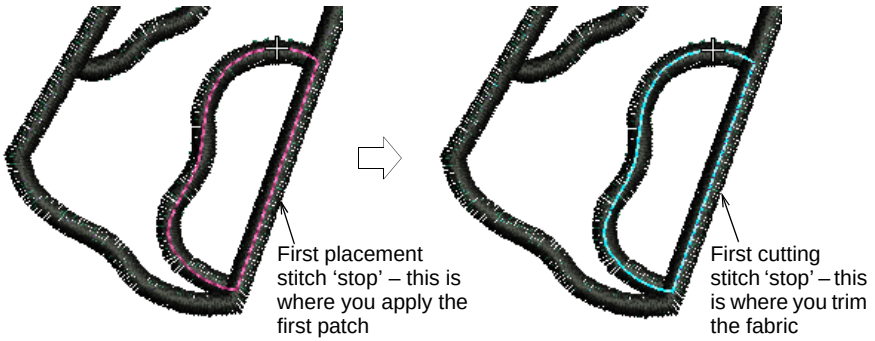
1 Click the **Show Pictures** and **Show Appliqué Fabric** icons to hide image and fabrics. See Placing fabric in patches in the Onscreen Manual for details.

2 Press the **End** key to travel to the end and the **Home** key to the start of the design.

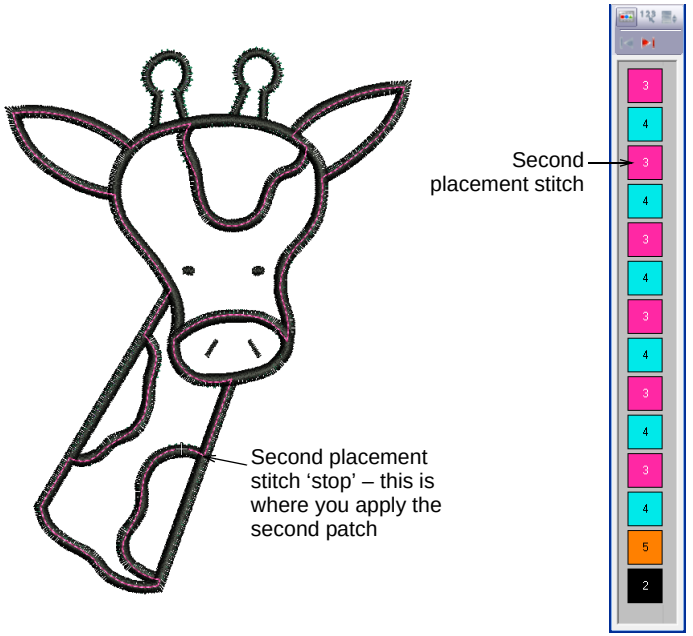
Upon pressing the **End** key, the white cross (current needle position marker) is located at the last stitch (red cross). Upon pressing **Home**, the white cross is located at the first stitch (green ring).


White cross - current needle position marker at the last stitch
End points
Start points
White cross - current needle position marker at the first stitch

3 Press the **Page Down** key to jump to the first placement stitch (pink). Press again to jump to the first cutting line stitch (sky blue).


First placement stitch 'stop' – this is where you apply the first patch
First cutting stitch 'stop' – this is where you trim the fabric

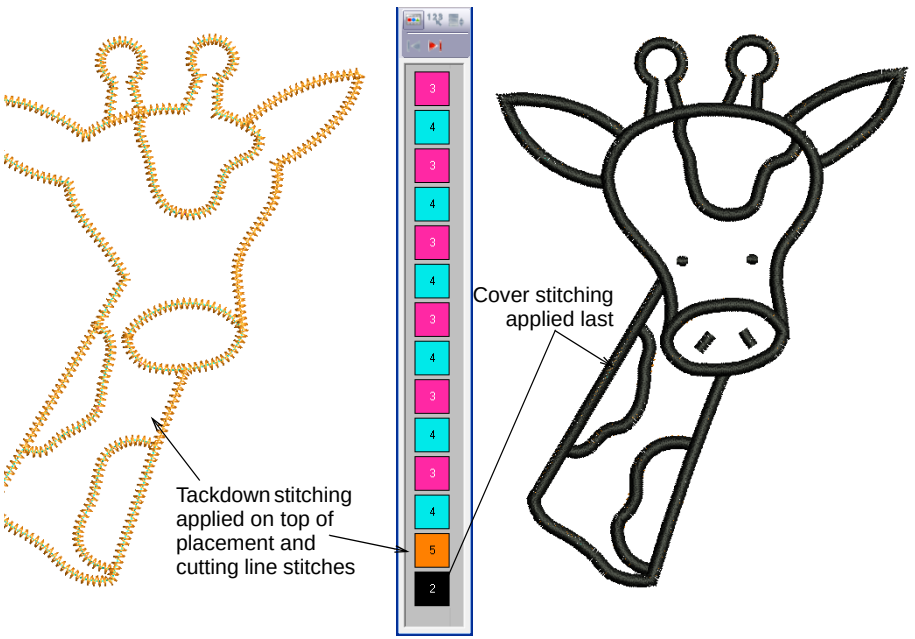
4 Press **Page Down** again to jump to the second placement stitch (pink).



Tip Press the **Page Up** key to jump back to the previous color change.

5 Continue traveling through the color changes and rehearse in your mind exactly where the fabric patches are to be placed and where they are to be trimmed.

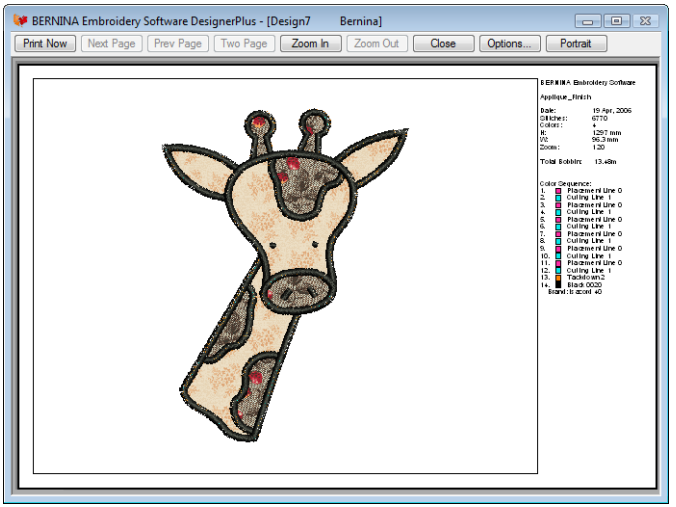
6 Once all patches have been positioned and cut, you will see the tackdown stitch being applied. Press **Page Down** again to view the cover stitching.



Tip The final result of this project is located in the 'Tutorials' folder. You may want to compare it at this point with your own completed design.

7 Click the **Print Preview** icon.

The design displays as it will be printed. See Printing designs in the Onscreen Manual for details.



8 Double-check the Color Sequence – it will show you when the machine will stop to allow you to assemble your appliqué.

9 Change printing options by clicking the **Options** button. See Setting print options for embroidery in the Onscreen Manual for details.

Note Large designs may be displayed over a number of pages if printed at actual size. Use **Next Page**, **Previous Page** or **Two Pages** to view multiple pages.

10 Click **Close** to exit the print preview.

11 Use **Write to Machine** to send your design directly to your BERNINA home embroidery machine ready to stitch. See Stitching out designs in the Onscreen Manual for details. See also detailed instructions provided in your embroidery machine documentation.

CHAPTER 12
MULTI-MEDIUM TUTORIAL

In this tutorial we explore the powerful support BERNINA Embroidery Software provides for multi-medium design. Here you will combine digital print with embroidery to create a multi-medium design. It is intended to be both digitally printed and embroidered in the center of a white T-shirt.

For the purposes of the tutorial, we assume the use of transfer paper and a normal color printer. With transfer paper, images have to be reversed during printing, and the transfer then ironed onto the garment. If the printer driver has an option to select the paper type as T-shirt transfer paper, it automatically mirrors the image for you. Otherwise, the driver will generally have a mirror function. Check the available options and use one that lets you reverse the image.

All steps required to complete the project are provided here. For further information, however, you are referred to the Onscreen Manual.

Getting started

Use Art Canvas to load, edit and save pictures as a backdrop for embroidery digitizing.

Use Embroidery Canvas mode to create or edit embroidery designs.

Use New (General toolbar) to start a new design with the NORMAL template.

This design is intended for the front a T-shirt, to cover an area of approximately 148 mm x 105 mm (5.83" x 4.13"). When we insert the artwork, we'll resize it to fit these dimensions. As our starting point, we're going to use one of the sample designs packaged with the software. See also Basic Procedures.

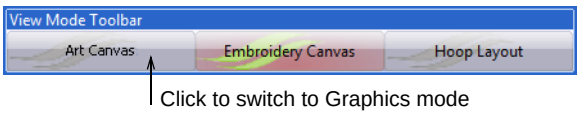
Tip Your BERNINA Embroidery Software comes with a range of artwork and embroidery designs that you can use as a starting point for your own projects. In addition to the packaged sample designs, you will find a dedicated 'Tutorials' folder which contains all the files you need to complete this and other tutorials. The final result of this and other projects is also located in this folder. You may want to view the final project file before and/or after completing the tutorial yourself. See also Working with design files.

To get started

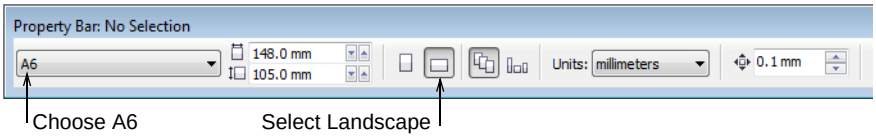
1 Double-click the BERNINA Embroidery Software shortcut icon on the MS Windows® desktop.

BERNINA Embroidery Software opens with a new, blank design (Design1) with the default hoop selected.

2 Switch to **Art Canvas**. See also Viewing modes.

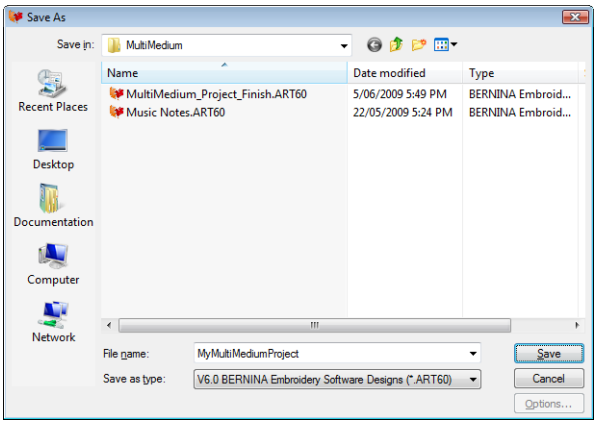


3 Choose **A6** for the canvas size from dropdown list and click **Landscape** for the canvas orientation.



4 Switch back to **Embroidery Canvas** and select **File > Save As**.

The **Save As** dialog opens.



5 Enter a suitable name – e.g. 'MyMultiMediumProject' – in the **File name** field and click **Save**.

Subsequently, you only have to click the **Save** button or press **Ctrl+S** to save any changes.

Note If you close the project and re-open during the course of this tutorial, make sure you ungroup all embroidery objects on re-opening.

Importing and placing clipart

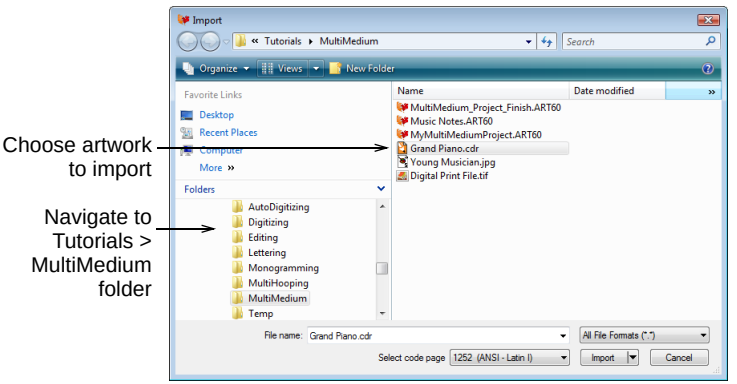
Use Load Picture (Image toolbar) to load an image for use as a digitizing backdrop.

Once in **Art Canvas** mode, we're going to start building our design by importing clipart graphics.

To import and place clipart

1 First, click **Load Picture** on the **Image** toolbar. See also Importing images into BERNINA Embroidery Software in the Onscreen Manual.

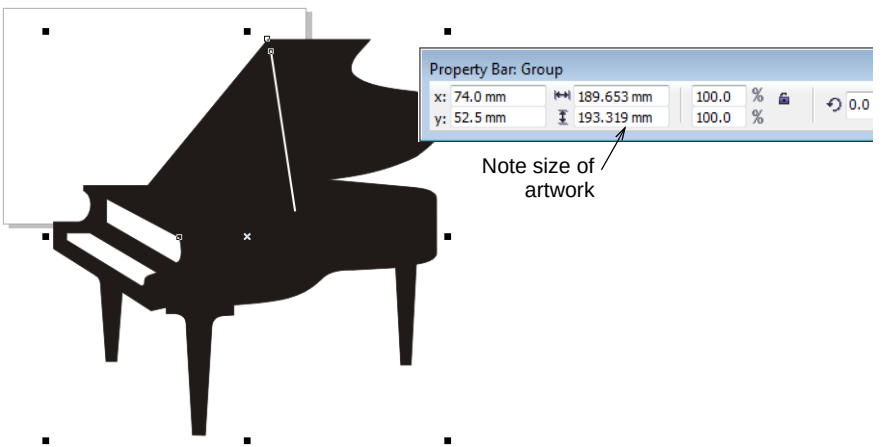
The **Import** dialog opens.



2 Navigate to the **My Designs - Embroidery Software 6** folder and select the **Tutorials > MultiMedium** folder.

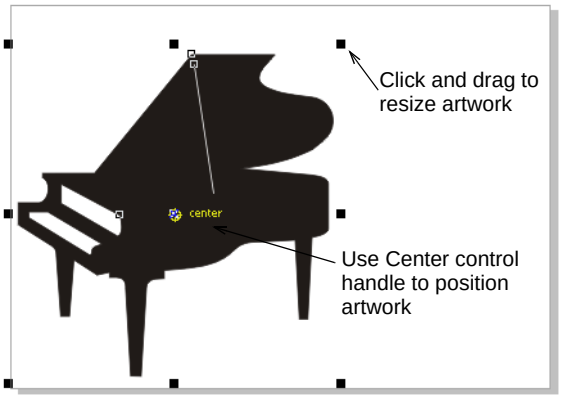
3 Select the 'Grand Piano.CDR' file and click **Import**.

4 Press **Enter** to center the imported artwork on the page.



Tip The size of the artwork is shown in the **Object(s) Size** fields of the **Property Bar**.

5 This clipart is too large for our design, so using the sizing handles, click and drag to rescale the artwork within the paper border as shown. See also Scaling objects in the Onscreen Manual.



Converting artwork to embroidery

Use Art Toolbox > Ellipse to draw elliptical shapes.

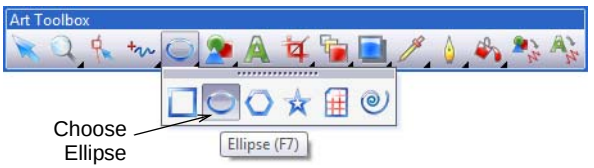
Use Art Toolbox > Convert Vectors to Embroidery to convert selected vectors to fill or outline stitches.

Click Show Hoop (General toolbar) to view the hoop. Right-click to change settings.

We're now going to create a picture frame for our photograph and convert it into embroidery.

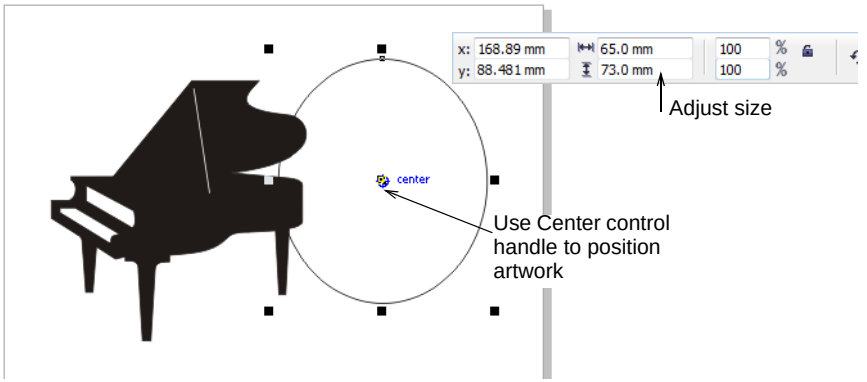
To convert artwork to embroidery

1 Choose the **Ellipse** tool from the **Art Toolbox**.



2 Draw an ellipse as shown below.

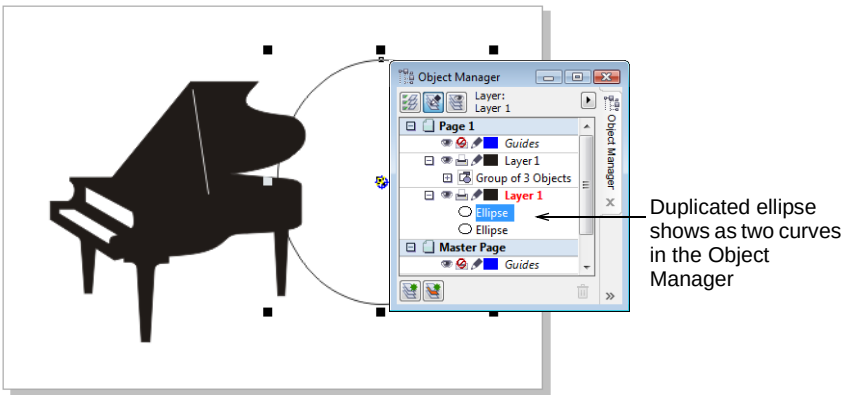
This will be used as the embroidered picture frame for our photo.



Tip Adjust the shape by entering the exact size in the **Property Bar**.

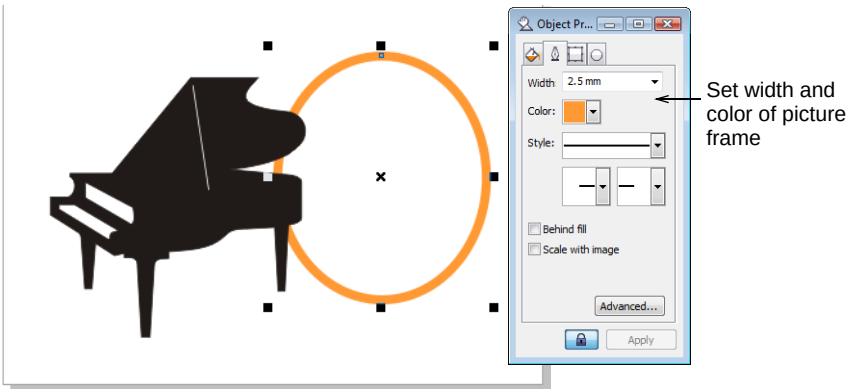
3 Make a copy of the ellipse by using the **Edit > Copy / Paste** functions.

The object will be duplicated on top of itself. This will be used later as a 'PowerClip' frame to position the photo exactly within our embroidered picture frame.



Tip Check the **Object Manager** to make sure the ellipse has been duplicated.

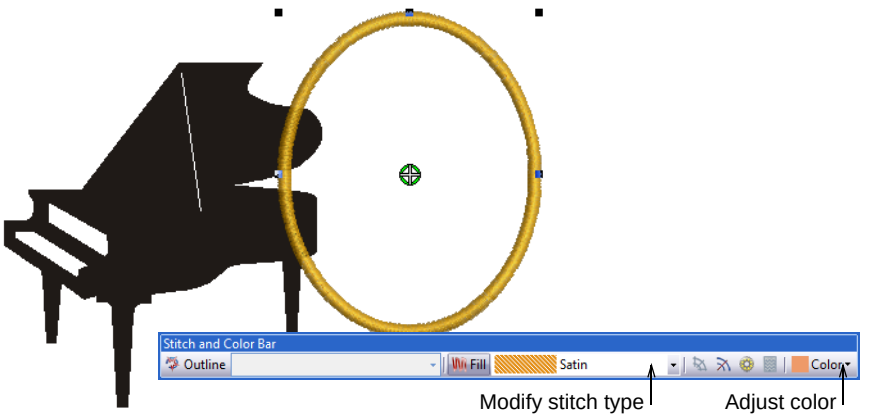
4 Before converting to embroidery, color your picture frame and size it using object properties as shown.



Tip Color the duplicate outline the same color as the picture frame. When the artwork prints out, the printed outline will match the thread.

5 To convert to embroidery, select the picture frame and click **Convert Vectors to Embroidery** on the **Art Toolbox** toolbar.

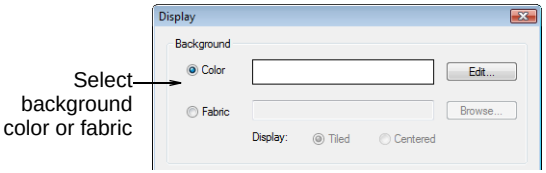
BERNINA Embroidery Software switches to **Embroidery Canvas** and automatically converts the selected object to embroidery. See also Digitizing with vector graphics in the Onscreen Manual.



6 Adjust stitch type and thread color from the **Stitch and Color Bar** as desired. See also Thread Colors and Charts in the Onscreen Manual.

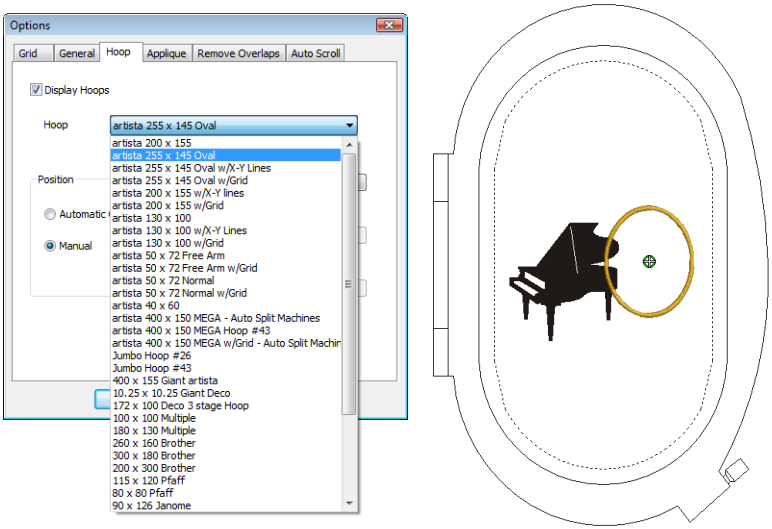
Tip You can search for a thread by code or description and assign it to a selected design color slot. See Searching and assigning threads in the Onscreen Manual for details.

7 Use the **Settings > Fabric Display** to choose a suitable background color to match the fabric you are printing to. See also Changing backgrounds in the Onscreen Manual.



8 Right-click the **Show Hoop** icon to choose a suitable hoop for the design.

In this case, we are using the default 'artista 255 x 145 Oval' hoop. See also Selecting hoops in the Onscreen Manual.


Options
Grid
General
Hoop
Applique
Remove Overlaps
Auto Scroll
Display Hoops
Hoop
artista 255 x 145 Oval
Position
Automatic
Manual
artista 200 x 155
artista 255 x 145 Oval
artista 255 x 145 Oval w/X-Y Lines
artista 255 x 145 Oval w/Grid
artista 200 x 155 w/X-Y lines
artista 200 x 155 w/Grid
artista 130 x 100
artista 130 x 100 w/X-Y Lines
artista 130 x 100 w/Grid
artista 50 x 72 Free Arm
artista 50 x 72 Free Arm w/Grid
artista 50 x 72 Normal
artista 50 x 72 Normal w/Grid
artista 40 x 60
artista 400 x 150 MEGA - Auto Split Machines
artista 400 x 150 MEGA Hoop #43
artista 400 x 150 MEGA w/Grid - Auto Split Machir
Jumbo Hoop #26
Jumbo Hoop #43
400 x 155 Giant artista
10.25 x 10.25 Giant Deco
172 x 100 Deco 3 stage Hoop
100 x 100 Multiple
180 x 130 Multiple
260 x 160 Brother
300 x 180 Brother
200 x 300 Brother
115 x 120 Pfaff
80 x 80 Pfaff
90 x 126 Janome

Tip By default, the hoop will center itself around the embroidery. If you want to include the artwork within the hoop, use the **Manual > Set Hoop Center** option to manually center the hoop. See Setting hoop centers in the Onscreen Manual for details.

9 Click the **Show Hoop** icon to turn off the hoop display. See also Hoops and grids in the Onscreen Manual.

Adding text to design

Use Lettering (Digitize toolbar) to add lettering directly onscreen.

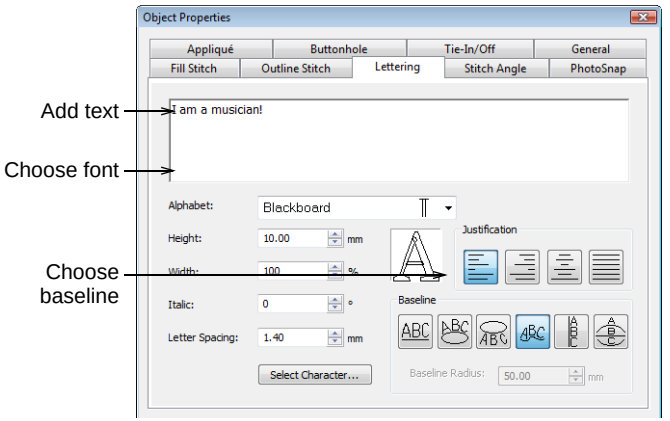
Use Reshape Object (Edit toolbar) to reshape lettering baselines.

We're now ready to add some text to the design.

To add text to the design

1 In the **Embroidery Canvas**, right-click the **Lettering** tool.

The **Object Properties** dialog opens.

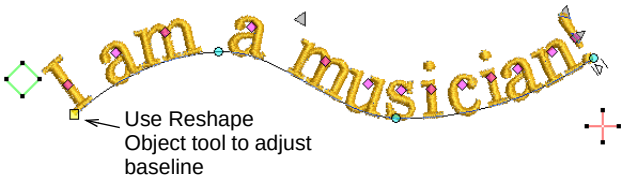


2 Enter the text – in this case 'I am a musician!' – and choose a font from the **Alphabet** dropdown. See also Adding lettering to embroidery designs in the Onscreen Manual.

3 Choose **Any Shape** for the baseline and click **Apply**. See also Applying lettering baselines in the Onscreen Manual.

4 Start digitizing the baseline. Press **Enter** to finish.

5 Use the **Reshape Object** tool to adjust the baseline. See also Reshaping baselines in the Onscreen Manual.



Tip Use the arrow keys to 'nudge' lettering into position. See Positioning objects in the Onscreen Manual for details.

Inserting the design

Click Color Film (General toolbar) to open the Color Film. Resequence by dragging and dropping objects in the list.

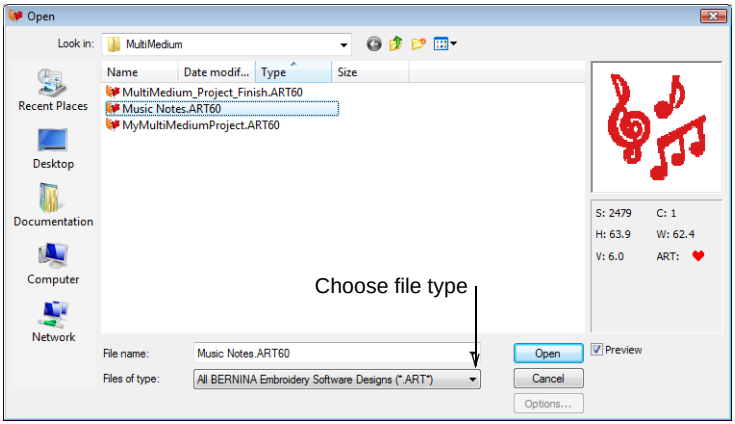
Click Show Individual Objects (Color Film toolbar) to view individual objects in order of stitching sequence. Drag and drop object icons to resequence.

Now we're going to insert some pre-digitized embroidery objects into our design to further embellish it.

To insert the design

1 Still in **Embroidery Canvas**, go to the **File** menu and select **Insert Design**.

The **Open** dialog opens.



2 Navigate again to the **Tutorials > MultiMedium** folder and choose the 'Music_Notes' embroidery file.

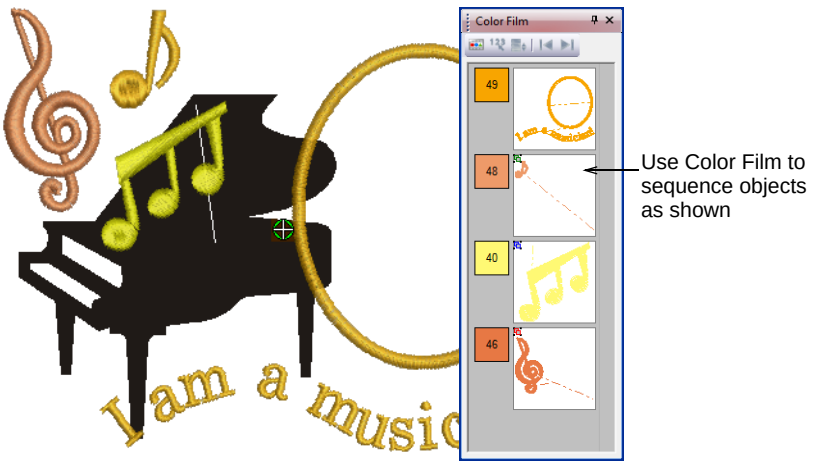
3 Click **Open**.

The grouped design opens in the Design Window.

4 Press **Ctrl + U** to ungroup the objects and drag them into postion as shown.

Tip Use control handles to change size, orientation, and position. See Arranging and Transforming Objects in the Onscreen Manual for details.

5 Change colors as desired.



6 Finally, check the design object sequence using the **Color Film** tool and sequence as shown. See also Sequencing objects with Color Film in the Onscreen Manual.

Inserting the photo

Use Image > Load Picture to Load graphics – bitmap and vector – into BERNINA Embroidery Software.

In Art Canvas mode, the View Mode toolbar includes the Show Embroidery button to toggle embroidery display on or off.

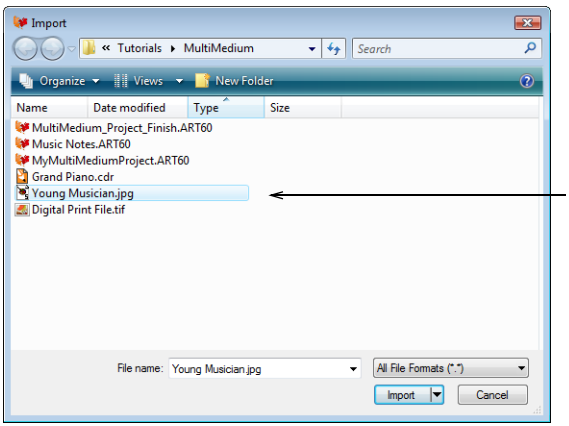
Now we are ready to insert our photo and position it within our embroidery picture frame.

To import the photo

1 Switch to **Art Canvas**.

2 Click the **Load Picture** icon on the **Image** toolbar.

The **Import** dialog opens.

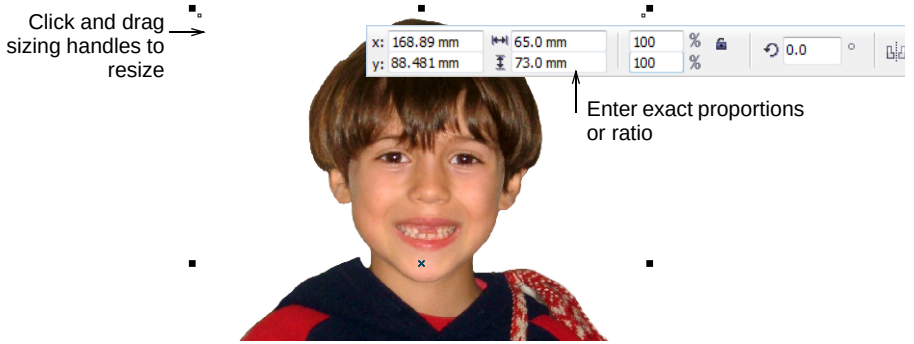


3 Navigate again to the **Tutorials > MultiMedium** folder and choose the 'Young Musician' photo.

4 Click **Import**.

The picture is placed in the Design Window.

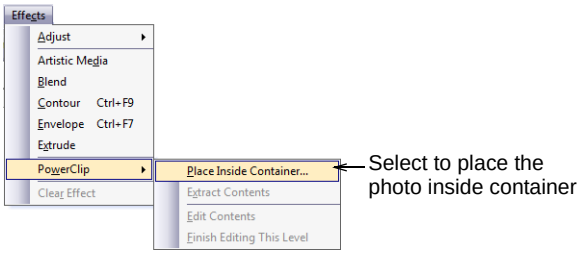
5 Use the sizing handles to resize the photo or enter the exact proportions into the **Property Bar**.



To place photo in the layout

1 Toggle the embroidery display off using the **Show Embroidery** button on the **View Mode** toolbar.

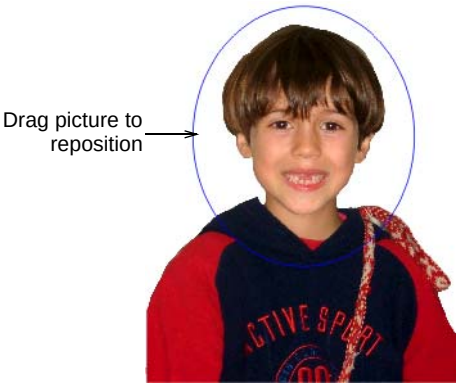
2 With the photo selected, go to the **Effects** menu, and select **PowerClip > Place Inside Container**.



3 Point to the picture frame and click.

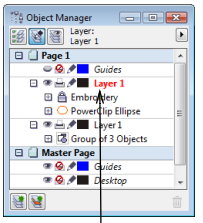
The photo is automatically inserted and centered.

4 If you notice that the photo isn't nicely cropped, go to **Effects > PowerClip > Edit Contents** and resize or reposition as required.



5 Once you are satisfied with the result, go to **Effects > PowerClip > Finish Editing This Level**.

6 Toggle the embroidery display back on with the **Show Embroidery** button and check the result.



Drag photo in front of piano artwork

Tip Use the **Object Manager** if necessary to click and drag the photo in front of the piano artwork.

Aligning embroidery and digital print

Use Print Preview (General toolbar) to preview a design before printing.

Use Print (General toolbar) to print a design.

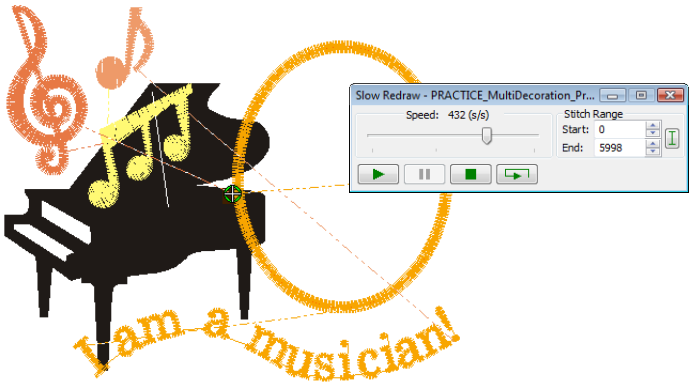
To ensure you get a perfect alignment between embroidery and digital print, you need to tell BERNINA Embroidery Software where to start sewing the embroidery part of the design. To do this, you will need to print off a worksheet and align the printed fabric on the hoop with the design center. See also Printing designs in the Onscreen Manual.

To align embroidery and digital print

1 Switch back to **Embroidery Canvas**.

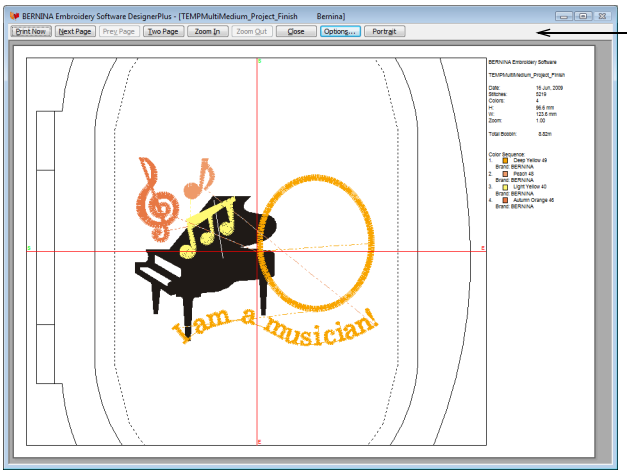
Note While the vector graphics display, the photo in the 'PowerClip' frame does not display.

2 Turn off **Artistic View** and check the start and end points by traveling through the design using the **Travel** functions or **Slow Redraw** tool. See Viewing the stitching sequence in the Onscreen Manual for details.



3 Click the **Print Preview** icon.

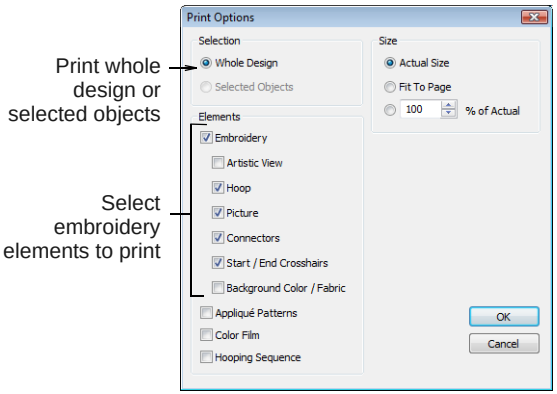
The **Print Preview** dialog opens.



Select Landscape view

4 Choose **Landscape** view and click the **Options** button.

The **Print Options** dialog opens.



5 Select the options you require and click **OK**.

In this case, we will accept the defaults. See Setting print options for embroidery in the Onscreen Manual for details.

6 Click the **Print Now** button to print out a copy of the worksheet.

Use this worksheet to align the printed fabric on the hoop with the design center.

Sending design to production

We're now at the stage where we can send the design to production. This is fun but also a bit tricky. We first need to print the graphical part of the design. For the purposes of the tutorial, we assume the use of transfer paper and a normal color printer. The image must be reversed when printed and then ironed onto the garment. Then the printed design must be correctly aligned and centered in the hoop for the embroidery stitchout. With a bit of practice, you'll be an expert in no time.

Tip For a more professional result, you may consider enlisting the services of a digital-print or screen-print shop for direct-to-garment (DTG) printing.

Printing the graphical part of the design

Use Art Canvas > View Mode > Show Embroidery to toggle embroidery object display on/off.

Use Standard > Print to print a design from Art Canvas.

Use General > Show Vectors to toggle on/off display of vector graphics.

Use General > Show Hoop to toggle the hoop display on/off.

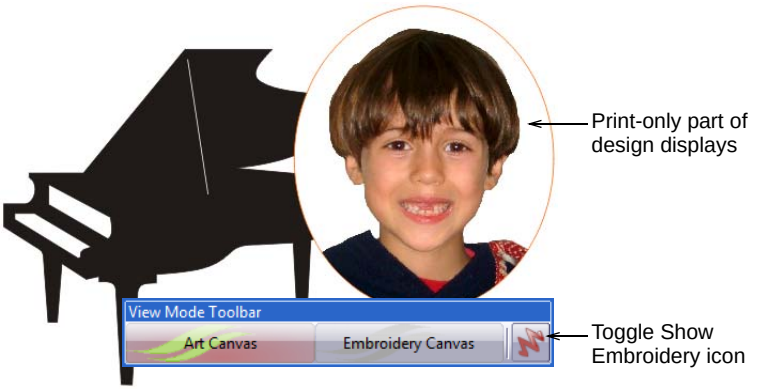
To send the design to production, you first need to print the digital art design of the background. To do this, you first need to hide the embroidery because you don't want it printing on the digital art printer. If transfer paper is used, images must be reversed when printed. Check the available options on your printer driver and use one to reverse the image on the transfer paper.

Tip If you don't have a digital printer of your own, you can save the print-ready design as a file to take to a professional print shop using the **File > Export > Save As Type > ...** option.

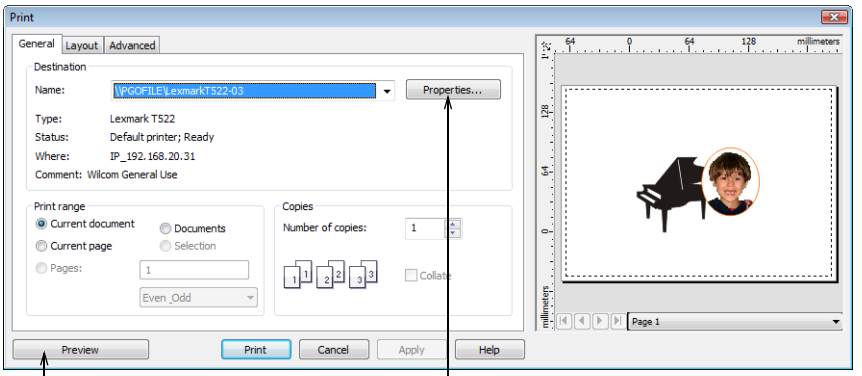
To print the graphical part of the design

1 Switch back to **Art Canvas** and toggle off the **Show Embroidery** icon.

The graphics-only part of the design displays in the Design Window.



2 Click the **Print** icon on the **Standard** toolbar to open the **Print** dialog.



3 For a realistic view click the **Preview** button.

4 Using the standard CorelDRAW® print options, you can now digitally print the design onto transfer paper or, if you have access to a direct-to-garment printer, the garment itself.

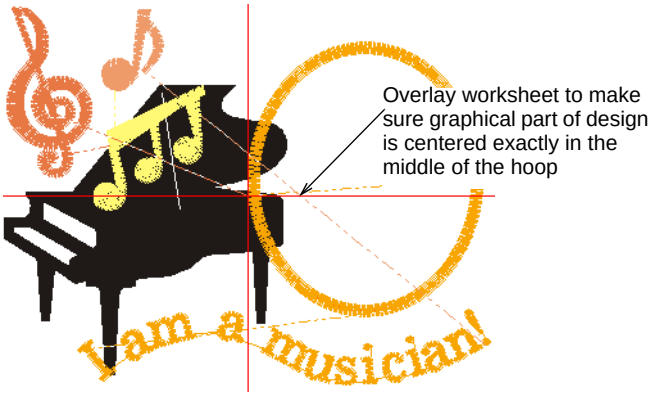
Tip If you are using transfer paper, click the **Properties** button to access the printer driver of your installed printer. If there is an option to select T-shirt transfer paper, the image is automatically mirrored. If not, it will generally have a mirror function you can use.

Stitching out the embroidery part of the design

Use Show Vectors (General toolbar) to toggle on/off display of vector graphics.

Use General > Write to Machine to send a design to machine.

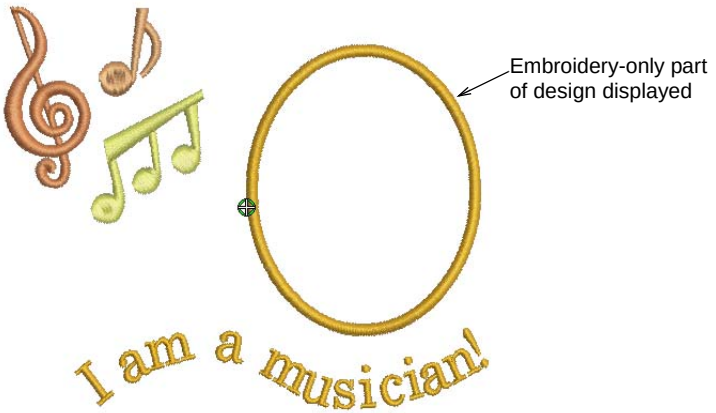
Now comes the exciting part – sewing out the embroidery over top of the printed image. For this you need to make sure the graphical part of the design is centered exactly in the middle of the hoop as per the worksheet.



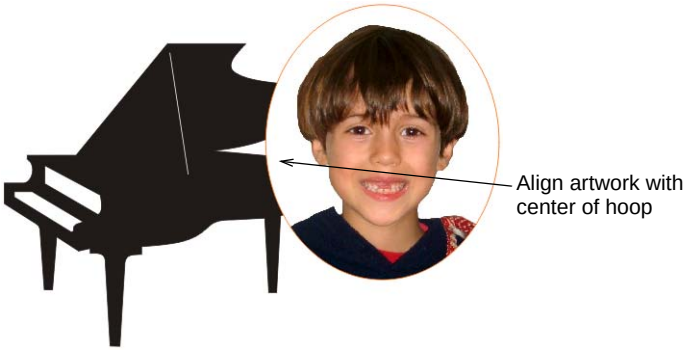
To stitch out the embroidery part of the design

1 Switch to **Embroidery Canvas** and toggle off **Show Vectors**.

The embroidery-only part of the design is displayed in the Design Window.



2 Hoop the printed design in the chosen hoop and align the artwork with the center of the hoop using the printed worksheet.



3 To sew out the design, click **Write to Machine** on the **General** toolbar.

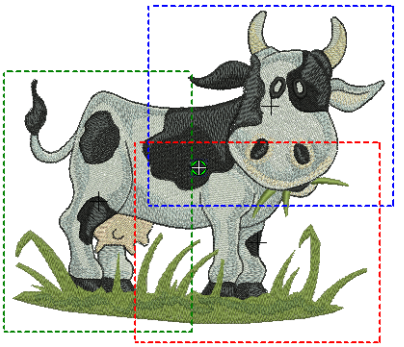
If the machine connection is working, the **Write to Embroidery System** dialog opens. The name and the thumbnail of your design are displayed. See Stitching out designs in the Onscreen Manual for details.

4 Click **Stitch out Selected Design**.

The **Writing file(s) to device** dialog displays, followed by a confirmation message. The design is sent to your embroidery machine ready for stitching.

Note If you have aligned the needle with the exact center of the design, the stitching should align perfectly on the garment with the digitally printed part of the design.

CHAPTER 13
MULTI-HOOPING TUTORIAL



Fabrics must of course be hooped before stitching out on the machine. BERNINA Embroidery Software lets you select from a wide range of standard factory-supplied hoops. If your project contains a large design or a number of smaller designs, you may need to use multiple hoopings.

In this tutorial we explore the powerful support BERNINA Embroidery Software provides for multiple hoopings. The software provides a dedicated **Hoop Layout** mode which allows you to create multiple hoopings. This means you can create embroidery designs that are larger than can be stitched out in a single hooping. Simply split such designs into components that can each be accommodated on a single hoop. These are then stitched consecutively to form the whole design. They can be sent directly to machine or saved to file.

All steps required to complete the project are provided here. For further information, however, you are referred to the Onscreen Manual.

Getting started

Use Embroidery Canvas mode to create and edit embroidery designs. Show embroidery shapes as well as graphics. View designs realistically in Artistic View.

Use Hoop Layout (View Mode toolbar) to switch to Hoop Layout mode.

Use Open (General toolbar) to open an existing design.

Click Show Hoop (General toolbar) to view the hoop. Right-click to change settings.

For the purposes of this tutorial, the design is to be stitched out on an 'artista 130 x 100 Normal' hoop. This hoop is a little too small for our design which measures approximately 156 x 197 mm. This will necessitate multiple hoopings.

Tip Your BERNINA Embroidery Software comes with a range of artwork and embroidery designs that you can use as a starting point for your own projects. In addition to the packaged sample designs, you will find a dedicated 'Tutorials' folder which contains all the files you need to complete this and other tutorials. The final result of this and other projects is also located in this folder. You may want to view the completed project file before and/or after completing the tutorial. See also Working with design files.

To get started

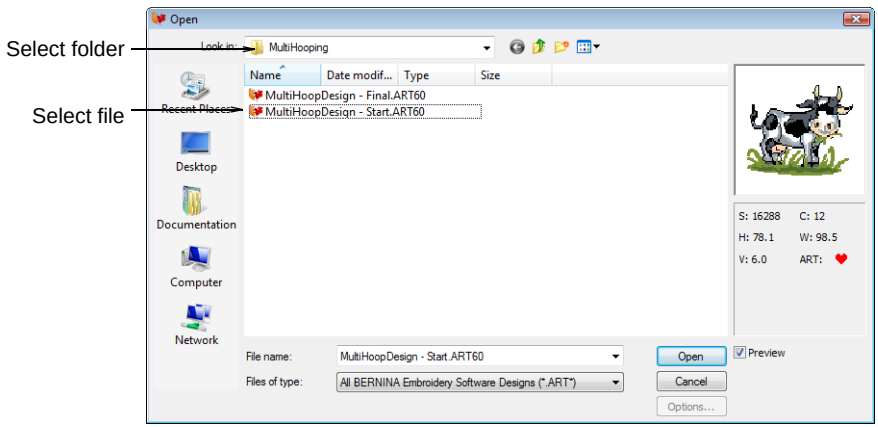
1 Double-click the BERNINA Embroidery Software shortcut icon on the MS Windows® desktop.

BERNINA Embroidery Software opens with a new, blank design (Design1) with the default hoop selected.

2 Choose **Embroidery Canvas** mode.

3 Click the **Open** icon on the **General** toolbar.

The **Open** dialog opens.

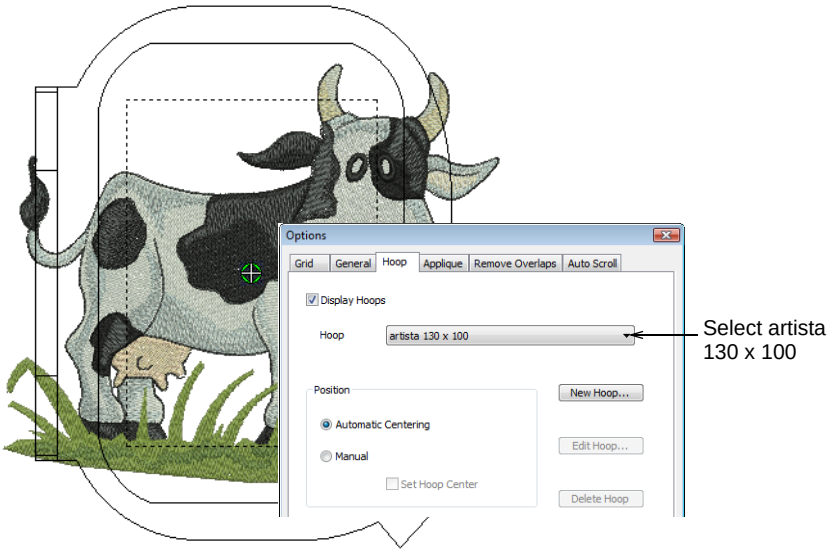


4 Navigate to the **My Designs - Embroidery Software 6** folder and select the **Tutorials > MultiHooping** folder.

5 Select **Art Files** from the **Files of type** to view **BERNINA Embroidery Software Designs** in the folder.

6 Select the 'MultiHoopDesign - Start.ART' file and click **Open**.

The embroidery design opens in the Design Window.



7 Right-click the **Show Hoop** icon.

The **Options > Hoop** dialog opens.

Note Each design can only use one size of hoop, so normally you would try to choose one to cover the largest object in the design.

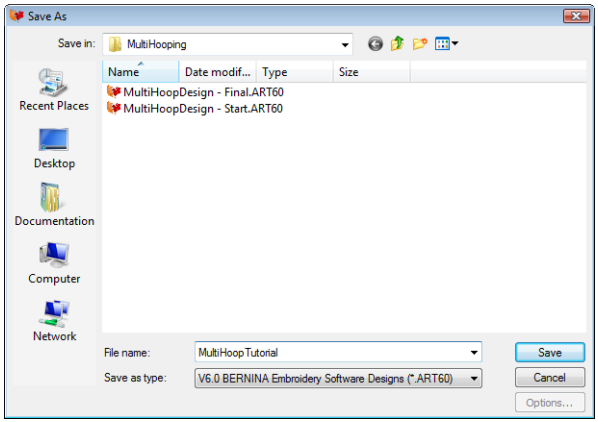
8 Check that 'artista 130 x 100 Normal' is selected.

9 Zoom out to better view the hoop – select the **Zoom Box** tool and right-click the design once.

Tip Once you have selected a hoop, you can toggle it on or off by clicking the **Show Hoop** icon. See Displaying the hoop in the Onscreen Manual for details.

10 Select **File > Save As**.

The **Save As** dialog opens.



Tip The **Save As** dialog opens to the same location where the original file is stored.

11 Enter a suitable name – e.g. 'MultiHoopTutorial' – in the **File name** field and click **Save**.

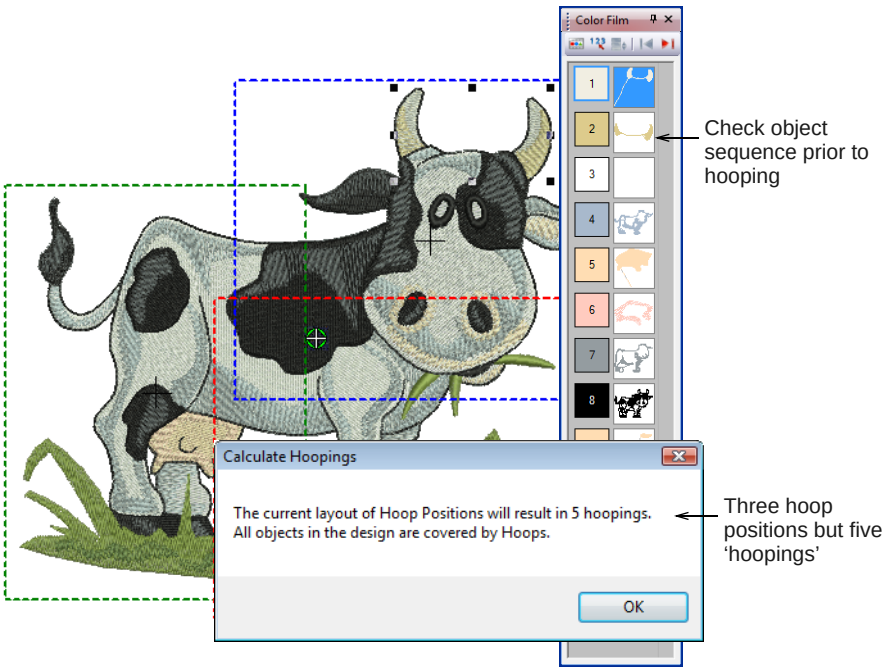
Tip Subsequently, you only have to click the **Save** button or **Ctrl+S** to save any changes.

Multi-hooping concepts

Before we start laying out our hoop positions, a bit of theory may be called for. You will probably want to come back and re-read this section once you have completed the project because you will then have a more practical grasp of the issues. But here goes ...

When BERNINA Embroidery Software calculates multiple hoopings, it attempts to split whole objects between sequential hoopings. Where one

object overlaps another, the **overlapped** object must be stitched before the **overlapping** object.


Color Film
Check object sequence prior to hooping
Calculate Hoopings
The current layout of Hoop Positions will result in 5 hoopings.
All objects in the design are covered by Hoops.
OK
Three hoop positions but five 'hoopings'

Bearing this in mind, try to ensure that:

- Each successive hoop position overlaps a previously stitched hoop position.
- Hoops are placed as near as possible to the order of the actual design object sequence. This will minimize the number of eventual hoopings.

Note 'Hooping' is not the same thing as 'hoop position' – you can have more hoopings than hoop positions but you can never have less. In other words, a single hoop position may involve more than one hooping in order to preserve the design sequence.

Hooping sequence

When a large design requires multiple hoopings, it is important to establish the stitching order so that objects in the foreground are sewn after those in the background. BERNINA Embroidery Software allows you to set up the

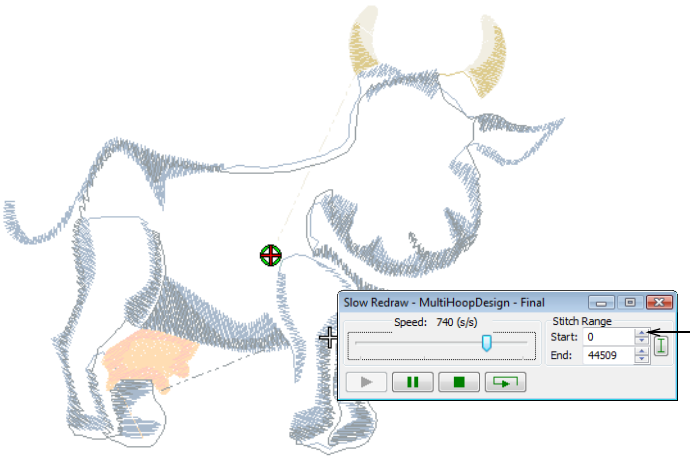
position and sequence of each hoop. Multiple hoops are color-coded as follows, according to their position in the sequence:

Hoop	Color
1	Dark Green
2	Blue
3	Red
4	Brown
5	Orange
6	Purple
7	Teal
8	Aqua

In the unlikely event that you use more than eight hoopings, the color sequence is repeated, as long as none of the previously created hoop positions is deleted.

Checking the design sequence

Knowing the design object sequence helps you place hoops in the best possible hooping sequence. A good technique is to use the **Color Film** tool in object mode as shown above. As you select objects from the list, they are highlighted in the design. This will help you understand the order in which objects are sewn, and hence the order in which they should be hooped. See also Viewing and selecting color blocks in the Onscreen Manual.


Slow Redraw - MultiHoopDesign - Final
Speed: 740 (s/s)
Stitch Range
Start: 0
End: 44509
Check stitching sequence of objects that cross hooping overlaps

Another useful tool is **Slow Redraw**. When you run **Slow Redraw**, you are checking to see if the start and end point of a particular object may have a

bearing on the number of hoopings. For example, if you split a large object but the first half is in the second hoop, this may result in an additional hooping. With **Slow Redraw**, you are aiming to make sure that any split objects are split between **adjacent** hoops (both in terms of position and hoop placement sequence) and that the object starts stitching in the earlier hoop. See also Simulating design stitchouts in the Onscreen Manual.

Adjusting the design sequence

While correct hoop placements reduce the number of calculated hoopings, sometimes the design object sequence may not be ideal for multi-hooping. You may find, as you gain experience, that the only way to reduce the number of hoopings is to re-sequence the design itself. This, however, is beyond the scope of this tutorial. As a general guideline, bear in mind the following:

- Stock designs which have been created for a single hoop are generally sequenced by color in order to reduce the number of color changes. This is important for single needle machines.
- Enlarging a stock design to the point where it requires multiple hoopings may require the design sequence to be changed in order to reduce the number of hoopings.
- Since a given stitchout can use only one size of hoop, choose a hoop that will cover the **largest** object in the design.
- Always try to place hoops as near as possible to the order of the actual design object sequence.

As you gain experience, your own judgement in these issues will be your best guide.

Note For the purposes of this project, using the hoop we are using and the size of design as is, five (5) hoopings is the best we can get **without** design re-sequencing.

Hooping calculations

While BERNINA Embroidery Software always preserves the original stitching sequence, hoop placements which follow the design object sequence reduce the number of calculated hoopings.

The time taken to calculate design hoopings is dependent more on the number of objects and hoop positions than stitch count. Designs converted from EXP, PES, HUS, etc will, in general, result in a larger number of objects than a native BERNINA Embroidery Software design. Hence, these designs will take longer to calculate. However, even with pure ART files, if the design is complex, large, and contains many hoop positions, calculation can take time.

Defining multiple hoop positions

Use Hoop Layout (View Mode toolbar) to switch to Hoop Layout mode.

Use Selection On (Multi-Hooping toolbar) to select hoops in Design Window.

Use Add Hoop (Multi-Hooping toolbar) to center new hoop in Design Window in upright orientation.

Use Add Hoop Right (Multi-Hooping toolbar) to place new hoop directly to right of selected hoop with 10 mm overlap between sewing fields.

Use Add Hoop Up (Multi-Hooping toolbar) to place new hoop directly above selected hoop.

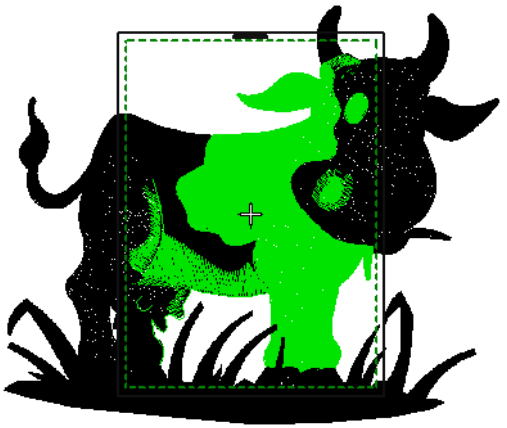
Click Rotate Hoop (Multi-Hooping toolbar) with left or right mouse buttons to rotate selected hoop 45° in either direction.

BERNINA Embroidery Software provides a dedicated **Hoop Layout** mode which allows you to create multiple hoopings. This means you can stitch out embroidery designs that are larger than can be accommodated within a single hoop. **Hoop Layout** mode allows you to define multiple hoop positions. The aim is to add hoops and move them around until you get the least number of hoopings necessary to accommodate the entire design. These are then stitched out consecutively. See also Hooping large designs in the Onscreen Manual.

To define multiple hoop positions

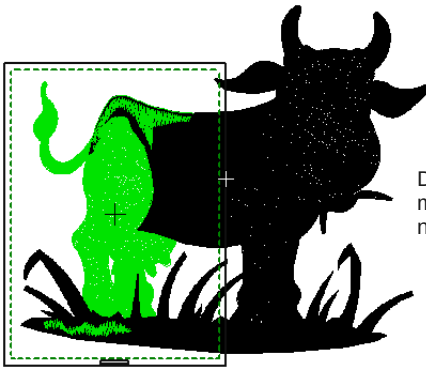
1 Switch to **Hoop Layout** mode. See Viewing modes for details.

When you enter **Hoop Layout**, covered objects – those that fit wholly within a hoop – display as green stitches. Uncovered objects – those that do **not** fit – display as black stitches.



Note No embroidery object can be selected or manipulated in **Hoop Layout**.

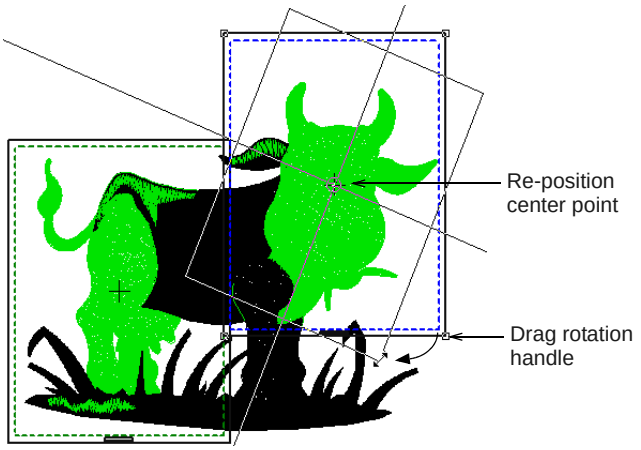
2 Click the **Selection On** icon, click the hoop outline, and drag it till it covers the hindquarters of the cow in the design.



3 Use the **Add Hoop** tools to add more hoops:

- Click the **Add Hoop** icon to add a new hoop to the Design Window in an upright orientation.
- Use the **Add Hoop Right** tool to place a new hoop directly to the right of a selected hoop with a 10 mm overlap between sewing fields.

- Similarly, use the **Add Hoop Up** tool to place a new hoop directly above a selected hoop.

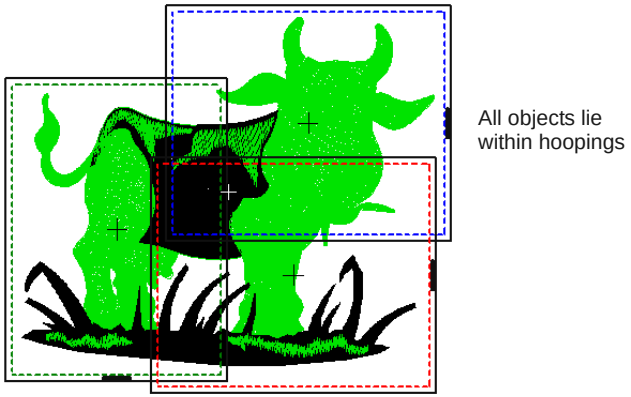


4 Re-position the additional hoops and rotate as necessary so that they completely cover all objects in the design.

- Click the **Rotate Hoop** icon with left or right mouse buttons to rotate a selected hoop 45° in either direction.
- Alternatively, click the hoop again and rotate hoops by means of rotation handles and rotation center-point.

5 Nudge selected hoops into final position using the arrow keys.

In this case, we should be able to accommodate the whole design within three hoop positions.



Note Notice, however, that while our design is entirely covered by separate hoop positions, some objects remain uncovered, as indicated by the black stitching. If you try to output at this stage, you will receive the message that some objects are still not covered. We will deal with this in the next step.

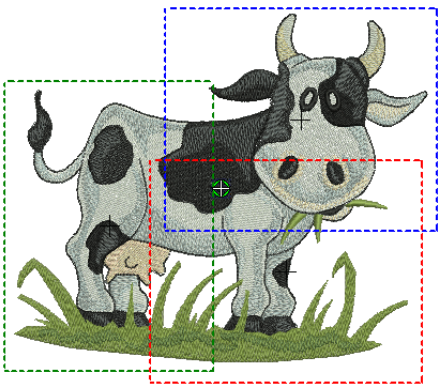
Splitting objects between hoopings

Use Splitting Guide (Multi-Hooping toolbar) to digitize one or more split lines in multi-hooped design prior to outputting to file, machine or memory card.

Use Reshape Splitting Guide (Multi-Hooping toolbar) to reshape split lines in Design Window.

Use Calculate Hoopings (Multi-Hooping toolbar) to evaluate hoopings that will result from current hoop layout.

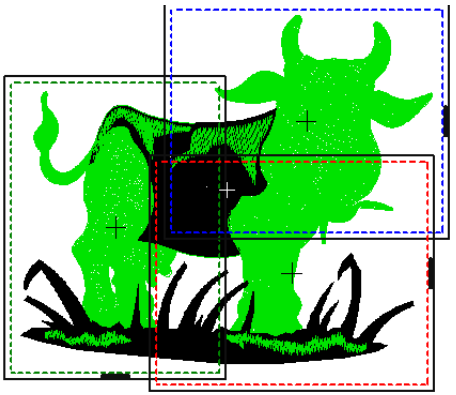
The **Splitting Guide** tool allows you to stitch out objects that would not otherwise fit within a hooping. In effect, it allows you to digitize one or more split lines in a multi-hooped design prior to outputting to file, machine or memory card. Although split lines are only visible in **Hoop Layout**, they are maintained when switching to other modes. Split lines do not affect object integrity and you can still reshape and transform split objects as before. See also Splitting objects between hoopings in the Onscreen Manual.



To split objects between hoopings

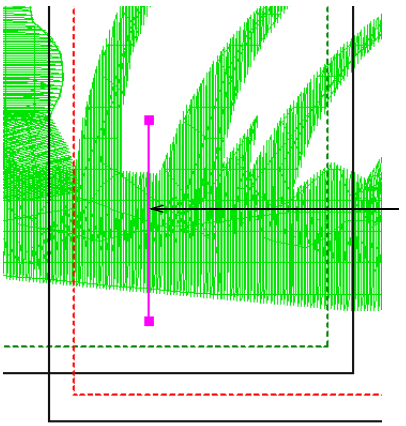
1 Select **Hoop Layout** mode.

While our design is entirely covered by three separate hoopings, objects which are not covered by a single hooping continue to display as black stitching.



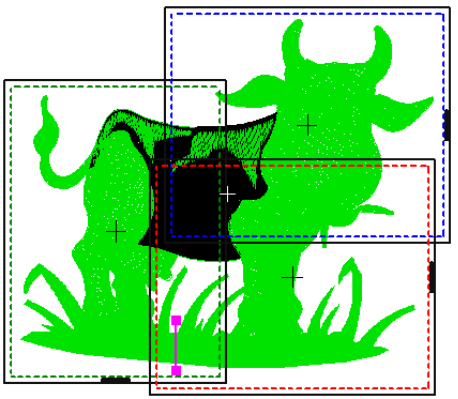
2 Select the **Splitting Guide** tool.

You are prompted to enter the starting point of the split line within sewing field overlaps.



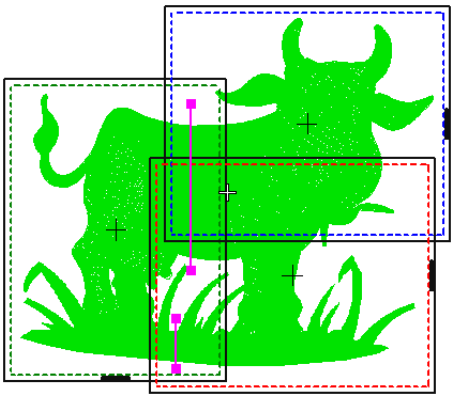
3 Digitize split lines just as you would open curve objects, using right-clicks for curves and left-clicks for corner points.

As long as splits occur within the sewing field of overlapping hoopings, the resultant ‘split objects’ become covered and are displayed in green.

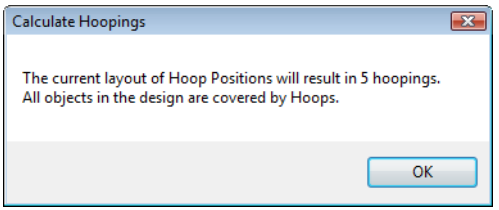


Lines that completely cross over objects that are not already covered will be split on output. The split will not necessarily be along the digitized line. Instead, it will be made as inconspicuous as possible. The resulting objects will preserve their original object type, stitch angle, parameters and color.

4 Repeat as necessary or press **Enter** to complete.



5 Finally, click the **Calculate Hoopings** icon to evaluate the hoopings that will result from the current hoop layout.


Calculate Hoopings
The current layout of Hoop Positions will result in 5 hoopings.
All objects in the design are covered by Hoops.
OK

We are now ready to save the design to one or more files or send it directly to machine. We will also print a copy of the design showing the hoop positions to help stitch it in the correct hooping order.

Note For the purposes of this project, using the hoop we are using and the size of design as is, five (5) hoopings is the best we can get **without** design re-sequencing.

Printing multi-hooped designs

If there is more than one hooping in the design, you have the option of printing hoops in multi-hooping view in their correct color sequence. The **Hooping Sequence** option allows you to print a **Color Film** type printout showing the objects in each hooping. See also Creating multi-hoop designs.

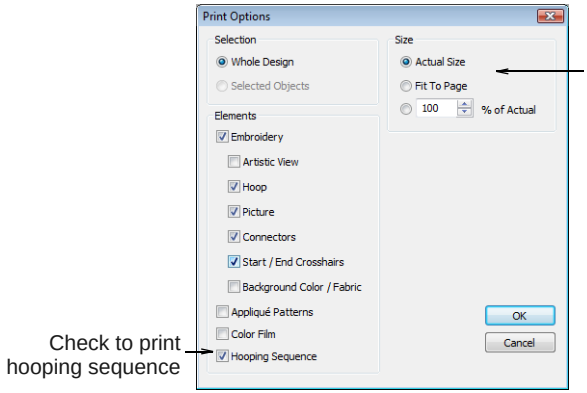
To print a multi-hooped design

1 Select **File > Print Preview**.

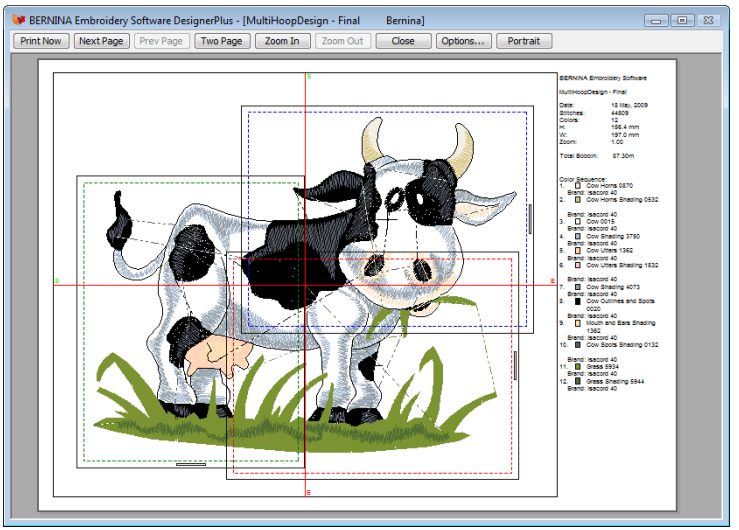
2 Click **Options** icon.

The **Print Options** dialog opens.

3 Select the **Hooping Sequence** checkbox.

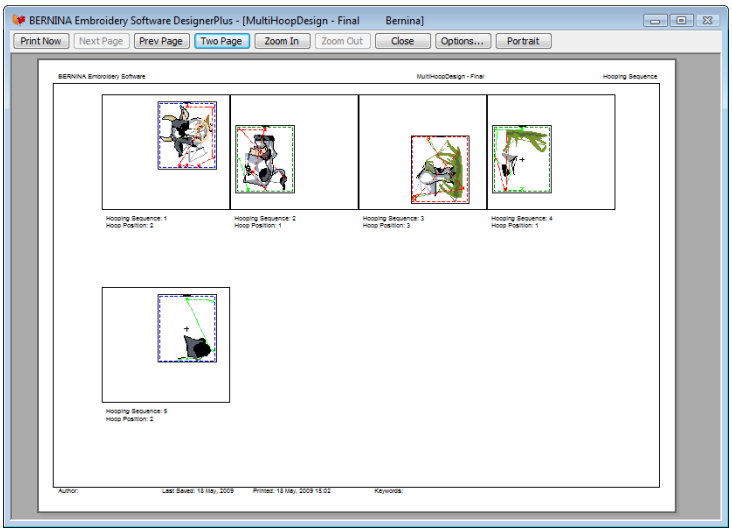


4 Select the **Actual Size** option and click **OK**.



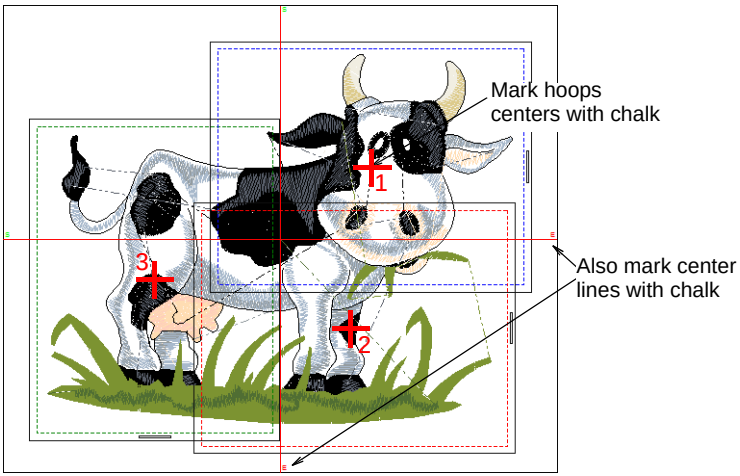
The following information is included on the next page, showing the objects in each hooping. This information is the same as shown in the

Hooping Sequence dialog. See Saving and outputting multi-hooped designs for details.



5 Click **Print**.

6 Lay the printout over your fabric, and use the information on it to mark the hoop centers with chalk or a washable ink.



Tip With multiple hoopings, you may have a lot of registration marks which can be potentially confusing. It may be a good idea to number

them as you go with small stickers. Use these to correlate the marks with the correct template on page 2 of your worksheet.

Saving and outputting multi-hooped designs

When a multi-hooped design is output, each part is stitched separately after the fabric has been re-hooped. When saving or sending such designs to machine, multi-hoopings and split lines are applied. **Hooping Sequence** mode is activated, showing the separate hoopings.

Tip When using the multi-hooping feature, we recommend you use a sticky-back or iron-on, tear-away stabilizer. Make sure it is heavy enough that the stabilizer doesn't tear when the registration marks are stitched.

Saving your multi-hooped design

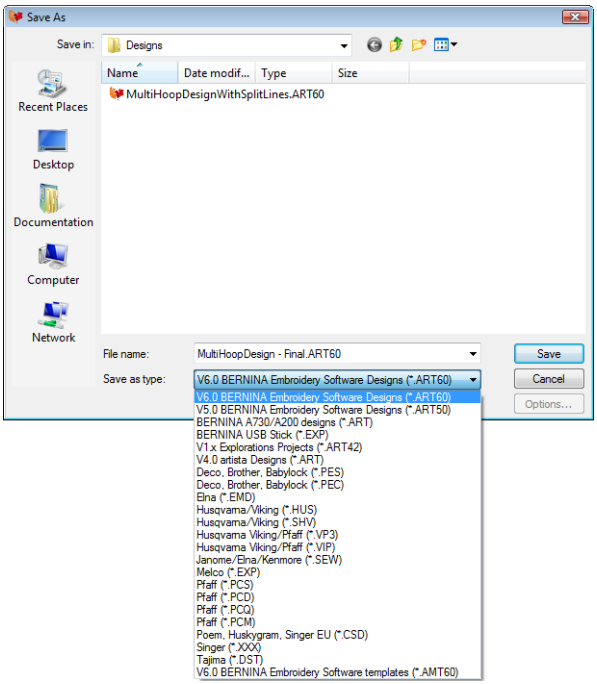
If more than one hooping is needed to cover your design, you may split it into separate files for each one. The software automatically calculates which files are to be saved out and shows how they will look. See also Outputting multi-hooped designs in the Onscreen Manual.

To save your multi-hooped design

1 Switch to **Hoop Layout** mode.

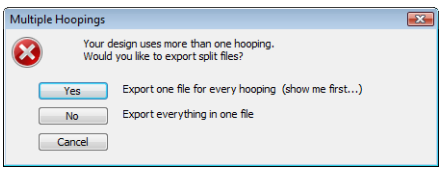
2 Select **File > Save As**.

A standard MS Windows® **Save As** dialog appears allowing you to browse to any folder, choose any name for the exported file, and choose a file format from a dropdown list.



3 Change the file name as required, and choose a destination folder and/or file format, and click **Save**.

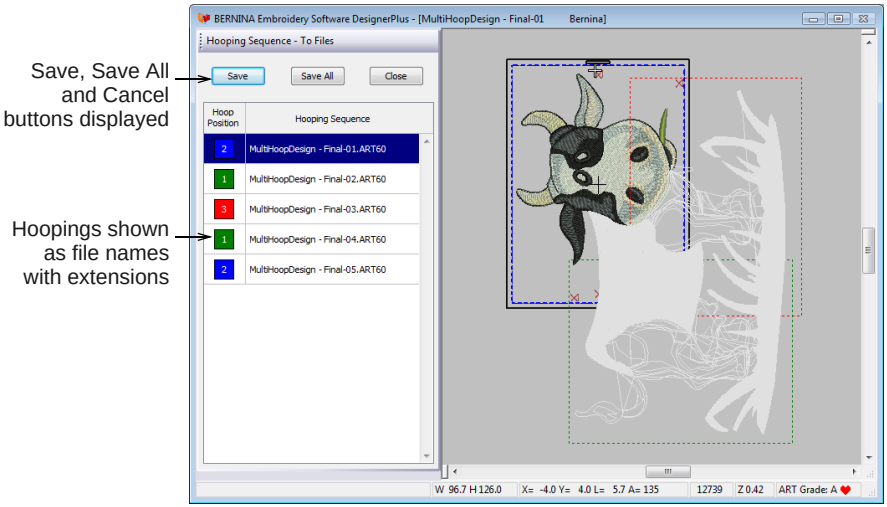
You are prompted to split the design into multiple files, or export everything to a single file.


Multiple Hoopings
Your design uses more than one hooping.
Would you like to export split files?
Yes
Export one file for every hooping (show me first...)
No
Export everything in one file
Cancel

4 Click **Yes**.

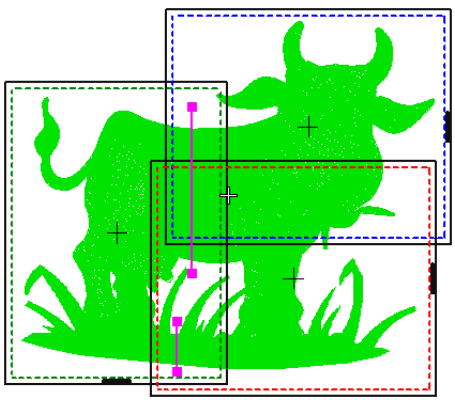
The system checks that all embroidery objects are covered. You will be warned if they are not. Otherwise, all hoopings needed to stitch the

design are calculated and displayed in the **Hooping Sequence** dialog. Hoopings are named as files with the chosen file extension.



5 Select a hooping and click **Save**.

All embroidery objects associated with the chosen hooping are saved to file as named in the list. Alternatively, click **Save All**. All files in the list, named as shown, are saved.



6 Click **Close**.

BERNINA Embroidery Software exits **Hooping Sequence** mode and displays the design in the Design Window in its original state - with split lines but with objects un-split.

Sending your multi-hooped design to machine

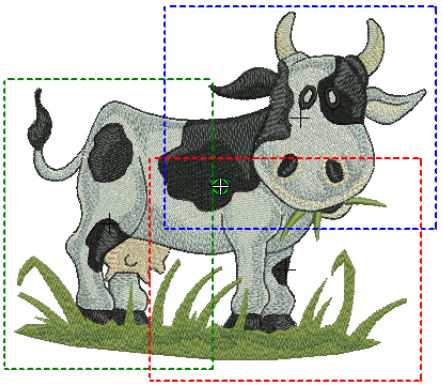
Use Write to Machine (General toolbar) to send a design to machine.

With a multi-hooped design, you can send one or more stitch files to sewing machine or memory card. The software automatically calculates which files are to be sent and shows you how they will look. The process is similar to saving multi-hooped designs to separate files. See also Hooping large designs in the Onscreen Manual.

To send your multi-hooped design to machine

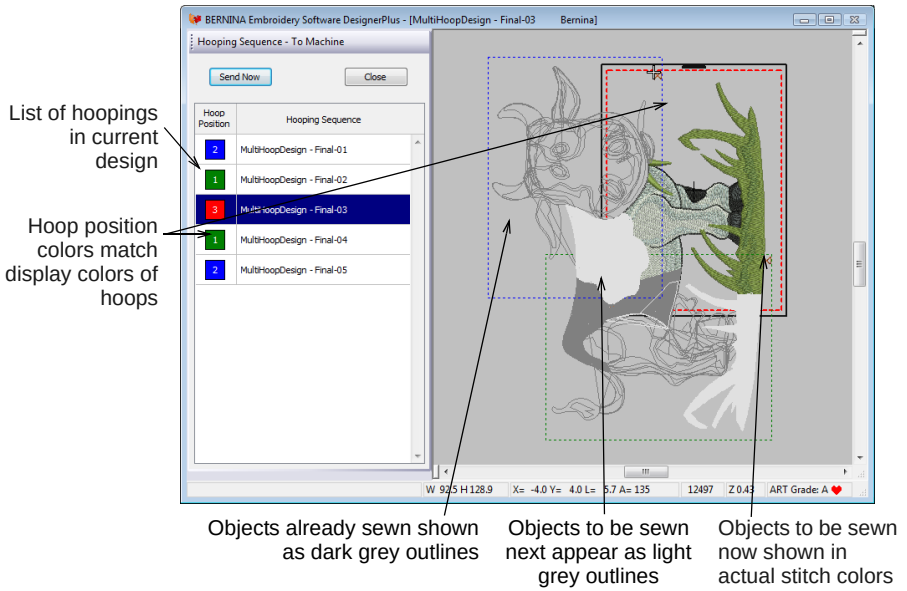
1 Switch to **Hoop Layout** mode.

2 Ensure that the embroidery machine or reader box have been correctly attached.



3 Click the **Write to Machine** icon.

The system checks that all objects are covered. All hoopings needed to stitch the design are displayed in **Hooping Sequence** mode.


List of hoopings in current design
Hoop position colors match display colors of hoops
BERNINA Embroidery Software DesignerPlus - [MultiHoopDesign - Final-03
Bernina]
Hooping Sequence - To Machine
Send Now
Close
Hoop Position
Hooping Sequence
MultiHoopDesign - Final-01
MultiHoopDesign - Final-02
MultiHoopDesign - Final-03
MultiHoopDesign - Final-04
MultiHoopDesign - Final-05
Objects already sewn shown as dark grey outlines
Objects to be sewn next appear as light grey outlines
Objects to be sewn now shown in actual stitch colors

Note Registration marks are red for the first file and green for any additional files.

4 Select any hooping in the list.

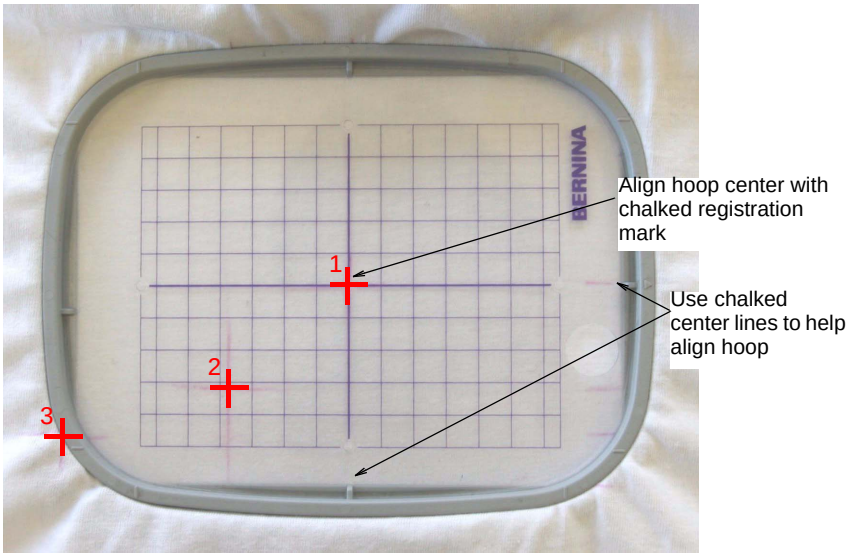
The newly selected hooping is shown as a dotted line surrounded by a solid line, while the other hoop positions are shown as dotted lines only. Objects within the selected hooping are shown in their actual stitch colors. Objects to be stitched before or after are shown as mid- and light-grey outlines respectively.

5 Click the **Send Now** button.

The system outputs a file containing everything to be stitched within the current hooping.

Tip As you stitch out each hooping, note the registration marks that are sewn with the last color change to help you align the next hooping.

6 Repeat this process as many times as necessary to send all hoopings.



When positioning your current hooping:

- Use the chalked marking in conjunction with the Bernina hoop template to locate the exact center of the hooping you are about to stitch out.
- Use the chalked center lines to correctly align the hoop on the fabric.

Tip With each hooping, place it on the embroidery machine and stitch the first color change. This will be a set of registration marks. Make sure these line up with the registration marks already sewn out with any preceding hooping. This is a further check that your hoopings correctly align.

PART III
PRODUCT FEATURE LIST

BERNINA Embroidery Software Product Feature List

Capability	Feature Name	EditorPlus	DesignerPlus	Relevant topic in Onscreen Manual
Basics				Basic Procedures
Open designs from PC		●	●	Opening designs
Open multiple designs		●	●	Opening designs
Create designs (templates)		●	●	Starting new designs
Save designs		●	●	Saving designs
Display the hoop and grid		●	●	Hoops and grids
Measure distances onscreen		●	●	Measuring distances onscreen
Undo/redo commands	Undo/Redo	●	●	Undoing and redoing commands
Move/dock toolbars		●	●	Moving and docking toolbars
Access object properties		●	●	Accessing object properties
View designs				Viewing Designs
View designs in Art Canvas mode	Art Canvas	⮝	⮝	Art Canvas mode
View designs in Embroidery Canvas mode	Embroidery Canvas	⮝	⮝	Embroidery Canvas mode
View designs in Hoop Layout mode	Hoop Layout		⮝	Hoop Layout mode
View simulated embroidery	Artistic View	●	●	Viewing simulated embroidery
View embroidery stitches	Stitch View	●	●	Viewing simulated embroidery
View needle points		●	●	Viewing needle points
View stitches and outlines		●	●	Viewing stitches and outlines
View design objects by color		●	●	Viewing objects by color
View designs in overview	Overview Window	●	●	Viewing designs in overview
Zoom in/out		●	●	Zooming in and out
Travel by object/color block		●	●	Traveling by object and color block
Travel by stitches		●	●	Traveling by stitches
View simulated design stitchout	Slow Redraw	●	●	Simulating design stitchouts
View/hide backdrops		●	●	Viewing backdrops
Change background colors/fabrics		●	●	Changing backgrounds
View design information		●	●	Viewing design properties
Preview designs		●	●	Previewing designs
Select objects				Selecting Objects
Select objects by point and click	Select Object	●	●	Selecting objects by point and click

● Included as standard ⮝ New/improved feature/option

Capability	Feature Name	EditorPlus	DesignerPlus	Relevant topic in Onscreen Manual
Select objects with bounding box		●	●	Selecting objects by bounding box
Select objects with Polygon Select	Polygon Select	●	●	Selecting objects by Polygon Select
Select objects by Tab key		●	●	Selecting objects by Tab key
Select all objects in design		●	●	Selecting all objects in a design
Deselect objects		●	●	Deselecting objects
View and select color blocks	Color Film	●	●	Viewing and selecting color blocks
Working with hoops				Hooping Designs
Display hoops		●	●	Selecting hoops
Create multi-hooped designs	Hoop Layout		⮝	Creating multi-hoop designs
Split objects between hoopings	Splitting Guide		⮝	Splitting objects between hoopings
Create custom hoops		●	●	Defining custom hoops
Modify custom hoops		●	●	Modifying custom hoops
System setup				Hardware and Software Setup
Calibrate monitor		●	●	Calibrating the monitor
Set grid options		●	●	Setting grid options
Set automatic scrolling		⮝	⮝	Setting auto scroll options
Set hoop options		●	●	Setting hoop options
Set closed-object appliqué options	Auto Appliqué		●	Setting Auto Appliqué options
Set Remove Overlaps options	Remove Overlaps	●	●	Setting Remove Overlaps options
Set automatic save		●	●	Setting automatic save
Set pointer position display options		●	●	Setting pointer position display options
Set other general options		●	●	Setting other general options
Digitizing methods				Digitizing Methods
Switch between fill and outline methods		●	●	Switching between fill and outline digitizing methods
Digitize open shapes	Open Object		●	Digitizing open shapes
Digitize closed shapes	Closed Object		●	Digitizing closed shapes
Digitize columns of varying width	Block Digitizing		●	Digitizing columns of varying width
Digitize circles and ovals	Circle/Oval		●	Digitizing circles and ovals
Digitize squares and rectangles	Rectangle		●	Digitizing squares and rectangles
Outline and fill stitches				Outline and Fill Stitches
Select outline stitches		●	●	Selecting outline stitches
Select fill stitches		●	●	Selecting fill stitches

● Included as standard ⮝ New/improved feature/option

Capability	Feature Name	EditorPlus	DesignerPlus	Relevant topic in Onscreen Manual
Create Single/Triple outlines	Single/Triple	●	●	Creating outlines with Single and Triple stitch
Create Satin outlines	Satin	●	●	Creating outlines with Satin stitch
Create Blanket outlines	Blanket	●	●	Creating outlines with Blanket stitch
Create Satin fills	Satin Fill	●	●	Creating fills with Satin fill
Create Step fills	Step Fill	●	●	Creating fills with Step fill
Change Step patterns	Step Pattern	●	●	Applying Step patterns
Thread colors and thread charts				Thread Colors and Charts
Change current colors		●	●	Changing current colors
Recolor selected objects		●	●	Recoloring selected objects
Search and assign threads		●	●	Searching and assigning threads
Match and assign threads		●	●	Matching and assigning threads
Change colors in entire design		⮝	⮝	Changing entire design colors
Modify thread charts		●	●	Modifying thread charts
Create custom thread charts		●	●	Creating custom thread charts
Object properties and templates				Object Properties and Templates
Set current object properties		●	●	Setting current object properties
Change object properties		●	●	Changing properties of selected objects
Change default object properties		●	●	Changing default object properties
Create design templates		●	●	Creating design templates
Modify design templates		●	●	Modifying design templates
Save current properties to template		●	●	Saving current properties to a template
Revert to NORMAL template		●	●	Reverting to the NORMAL template
Improving stitch quality				Improving Stitch Quality
Adjust fabric settings		●	●	Adjusting fabric settings
Apply automatic underlays		●	●	Stabilizing with underlays
Apply automatic pull compensation		●	●	Compensating for fabric stretch
Preserve long stitches	Auto Jump	●	●	Preserving long stitches
Adjust tie-in/off settings		●	●	Adjusting tie-in/off settings
Set automatic start and end points	Auto Start/End	●	●	Setting automatic start and end points
Digitizing with backdrops				Digitizing with Backdrops
Scan bitmap images		⮝	⮝	Scanning artwork
Load bitmap and vector pictures		⮝	⮝	Loading pictures
Crop images for digitizing		●	●	Cropping images for digitizing

● Included as standard ⮝ New/improved feature/option

Capability	Feature Name	EditorPlus	DesignerPlus	Relevant topic in Onscreen Manual
Reshape cropped images	Reshape Object	●	●	Reshaping cropped images
Edit images in a graphics application	Touch Up Picture	⅄	⅄	Editing images in graphics applications
Save backdrops as separate files		●	●	Saving backdrops as separate files
Prepare non-outlined images	Image Preparation	⅄	⅄	Preparing non-outlined images
Prepare outlined images	Outlined Image Preparation	⅄	⅄	Preparing outlined images
Automatic digitizing				Automatic Digitizing
Convert vectors to embroidery	Convert to Embroidery	⅄	⅄	Converting vectors to embroidery
Convert embroidery to vectors	Convert Selected Embroidery to Art Vectors		⅄	Converting embroidery to vectors
Digitize filled shapes automatically	Magic Wand	●	●	Digitizing fills automatically
Digitize outlines automatically	Magic Wand	●	●	Digitizing outlines automatically
Digitize whole images automatically	Auto Digitizer	●	●	Digitizing whole images automatically
Create automatic outlines and borders	Auto Digitizer	⅄	⅄	Creating automatic outlines and borders
Create designs from photographs	PhotoSnap	●	●	Digitizing with PhotoSnap
Combining and sequencing objects				Combining and Sequencing Objects
Insert designs		●	●	Inserting designs
Copy and paste objects		●	●	Copying and pasting objects
Duplicate objects		●	●	Duplicating objects
Clone objects	Quick Clone	●	●	Cloning objects
Group/ungroup objects	Group/Ungroup	●	●	Grouping and splitting objects
Break objects apart	Break Apart	●	●	Splitting into component objects
Resequence objects		●	●	Sequencing objects
Manipulate color blocks and objects	Color Film	⅄	⅄	Sequencing objects with Color Film
Sequence entire designs automatically	Stitch Sequence	●	●	Auto-sequencing entire designs
Arranging and transforming objects				Arranging and Transforming Objects
Position objects		●	●	Positioning objects
Align objects		●	●	Aligning objects
Scale objects		●	●	Scaling objects
Rotate objects		●	●	Rotating objects
Skew objects		●	●	Skewing objects

● Included as standard ⅄ New/improved feature/option

Capability	Feature Name	EditorPlus	DesignerPlus	Relevant topic in Onscreen Manual
Mirror objects		●	●	Mirroring objects
Mirror-merge objects		●	●	Mirror-merging objects
Create wreaths		●	●	Creating wreaths
Reshaping and editing objects				Reshaping and Editing Objects
Reshape objects	Reshape Object	●	●	Reshaping objects
Adjust stitch angles		⮝	⮝	Adjusting stitch angles
Change entry and exit points		●	●	Adjusting entry and exit points
Stitch editing				Editing Stitches
Select stitches		●	●	Selecting stitches
Insert stitches		●	●	Inserting stitches
Move stitches		●	●	Moving stitches
Delete stitches		●	●	Deleting stitches
Specialized digitizing techniques				Specialized Digitizing Techniques
Create freehand embroidery	Freehand Draw Embroidery		⮝	Creating freehand embroidery
Reinforce outlines			●	Reinforcing outlines
Cut holes in objects	Add Holes		●	Cutting holes in objects
Remove underlying stitching	Remove Overlaps	●	●	Removing underlying stitching
Fill holes in objects	Fill Holes		●	Filling holes in objects
Create outlines and borders	Outline Design		⮝	Creating outlines and borders
Create buttonholes	Add Buttonhole	●	●	Creating buttonholes
Artistic stitch effects				Artistic Stitch Effects
Create contour fills	Contour		⮝	Creating contour fills
Create fancy fills	Fancy Fill	●	●	Creating fancy fills
Create cross stitch fills	Cross Stitch		⮝	Creating cross stitch fills
Create textured edges	Textured Edge	●	●	Creating textured edges
Create wave effects	Wave Effect	●	●	Creating wave effects
Creating star fills	Star Fill		⮝	Creating star fill effects
Create gradient fills	Gradient Fill		●	Creating gradient fills
Create open fills	Travel on Edges	●	●	Creating open fills
Create color blending effects	Color Blending		●	Creating color blending effects
Create morphing effects	Morphing		●	Creating morphing effects

● Included as standard ⮝ New/improved feature/option

Capability	Feature Name	EditorPlus	DesignerPlus	Relevant topic in Onscreen Manual
Pattern runs and fills				Patterned Stamps, Runs and Fills
Add pattern stamps	Pattern Stamp		●	Adding pattern stamps
Create pattern runs	Pattern Run	●	●	Creating pattern outlines
Create pattern fills	Pattern Fill	●	●	Creating pattern fills
Create your own pattern sets			●	Managing patterns
Create stitch patterns with carving stamps	Carving Stamp		⅄	Creating stitch patterns with carving stamps
Craft stitch borders and fills				Craft Stitch Borders and Fills
Create blackwork outlines	Blackwork Border		●	Creating blackwork outlines
Create backstitch outlines	Backstitch		●	Creating backstitch outlines
Create stemstitch outlines	Stemstitch		●	Creating stemstitch outlines
Create candlewicking outlines	Candlewicking Border		●	Creating candlewicking outlines
Create blackwork fills	Blackwork Fill		●	Creating blackwork fills
Create candlewicking fills	Candlewicking Fill		●	Creating candlewicking fills
Create lacework fills	Lacework		●	Creating lacework fills
Create ripple fills	Ripple		⅄	Creating ripple fills
Create stippling fills	Stipple		⅄	Creating stippling fills
Appliqué				Digitizing for Appliqué
Create appliqué	Auto Appliqué		●	Creating closed-object appliqué
Create partial cover appliqué	Partial Appliqué		●	Creating partial cover appliqué
Create open-object appliqué	Advanced Appliqué		●	Creating open-object appliqué
Embroidery lettering				Embroidery Lettering
Add lettering to embroidery designs		●	●	Adding lettering to embroidery designs
Create horizontal baselines		●	●	Creating horizontal baselines
Create vertical baselines		●	●	Creating vertical baselines
Create circle baselines		●	●	Creating circular baselines
Create multiple baselines		●	●	Creating predefined baselines
Create custom baselines		●	●	Creating custom baselines
Format lettering (italics, bolding, justification)		●	●	Formatting lettering
Adjust letter spacing (overall, individual, line)		●	●	Adjusting spacings
Edit lettering text		●	●	Editing lettering text

● Included as standard ⅄ New/improved feature/option

Capability	Feature Name	EditorPlus	DesignerPlus	Relevant topic in Onscreen Manual
Scale lettering		●	●	Scaling lettering
Remove underlay from small lettering		●	●	Removing underlay from small lettering
Transform lettering objects (rotate, skew)		●	●	Transforming lettering objects
Adjusting individual letters (reposition, transform, reshape)		●	⮝	Adjusting individual letters
Add stitch angles to letters		●	●	Adding stitch angles to letters
Recolor letters		●	●	Recoloring letters
Embroidery lettering – special				Embroidery Lettering
Convert text to embroidery			⮝	Converting text to embroidery
Convert TrueType fonts to embroidery			●	Converting fonts to embroidery
Add special characters and symbols		●	●	Adding special characters
Special alphabets		●	●	Using special alphabets
Create special effects with Elastic Lettering	Elastic Lettering	●	●	Creating special effects with Elastic Lettering
Monogramming				Monogramming
Create monogram lettering with initials	Monogramming	⮝	⮝	Creating monogram lettering with initials
Create monogram lettering with names		⮝	⮝	Creating monogram lettering with names
Add ornaments to monograms		●	●	Adding ornaments to monograms
Create ornament layouts		●	●	Creating multi-ornament layouts
Add borders to monograms		●	●	Adding borders to monograms
Create your own borders			●	Creating custom borders
Design processing				Design Processing & Output
Print designs		●	●	Previewing and printing worksheets
Set print options for embroidery		●	●	Setting print options for embroidery
Print appliqué patterns		●	●	Printing appliqué patterns
Print Color Film		●	●	Printing Color Film
Print multi-hooped designs		⮝	⮝	Printing multi-hooped designs
Print thread charts		●	●	Printing thread charts
Save designs as images		●	●	Saving designs as images
Stitch out designs		●	●	Stitching out designs
Output multi-hooped designs			⮝	Outputting multi-hooped designs
Open stitch files with object conversion		●	●	Opening files with conversion
Open stitch files without object conversion		●	●	Opening files without conversion
Read designs from machine		●	●	Reading designs from machine

● Included as standard ⮝ New/improved feature/option

Capability	Feature Name	EditorPlus	DesignerPlus	Relevant topic in Onscreen Manual
Write designs to machine		●	●	Writing designs to machine
Write designs to USB stick		●	●	Writing designs directly to USB stick
Store designs with Magic Box		●	●	Storing designs with Magic Box
Save designs in PES format		●	●	Saving designs in PES format
Design management				Design Management
Browse for designs in folders		●	●	Browsing designs in folders
View zipped designs in folders		●	●	Viewing archived designs
Locate missing files		●	●	Locating missing files
Change locale		●	●	Changing locale
Open designs in BERNINA Embroidery Software		●	●	Opening designs in BERNINA Embroidery Software
Create designs with custom templates		●	●	Creating designs with custom templates
Run simple and complex sorts		●	●	Sorting files in folders
Print designs		●	●	Printing designs with BERNINA Portfolio
Print design catalogs		●	●	Printing design catalogs
Stitch out designs		●	●	Stitching out designs
Convert design files		●	●	Converting design files
Archive design files		●	●	Archiving design files
Organize designs in folders		●	●	Organizing designs in folders

● Included as standard ⮝ New/improved feature/option

PART IV
QUICK REFERENCE

BERNINA Embroidery Software Quick Reference

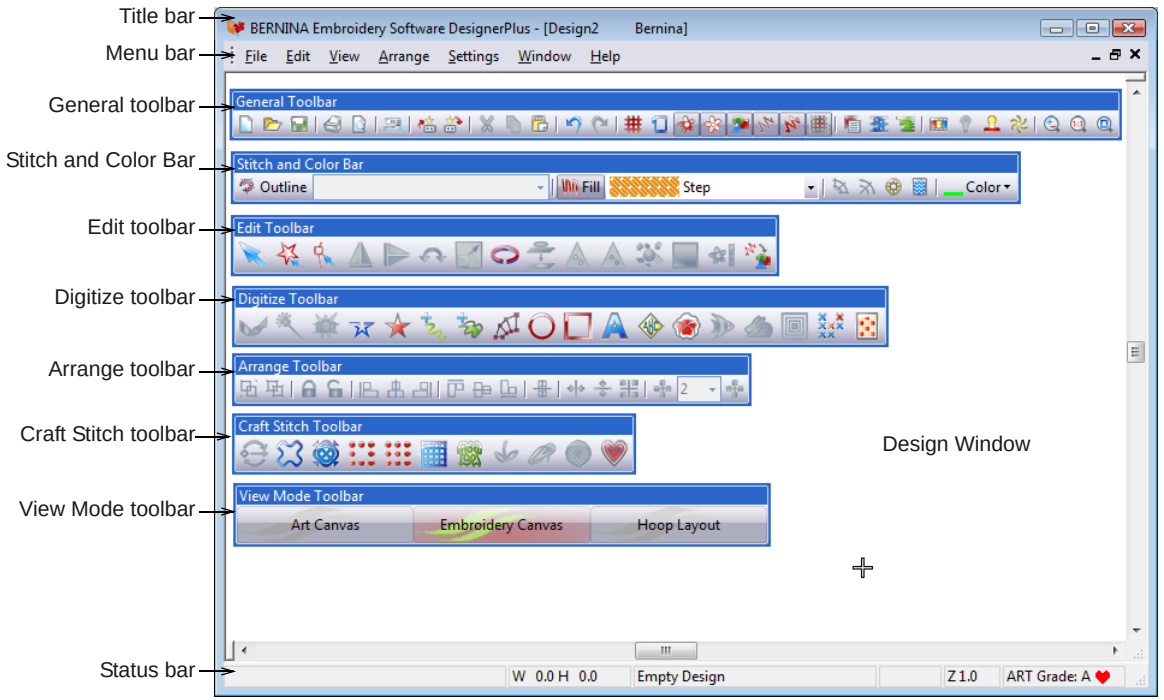
Embroidery Canvas

Digitize and edit embroidery designs. Show embroidery shapes as well as graphics. View designs realistically in simulated 3D.

BERNINA Embroidery Software integrates with CorelDRAW® Essentials 4 into a single application. The application has one workspace or 'Design Window' but you interact with it in separate operating modes: **Art Canvas** and **Embroidery Canvas**. A third mode is available for multi-hooping large designs. This Quick Reference Guide details all menu options and toolbars available in **Embroidery Canvas** mode. Not all options described here are relevant to all product levels. See also Product Feature List in the Onscreen Manual.

Embroidery Canvas Design Window

The screen image below displays an exploded view of **all** toolbars in the BERNINA DesignerPlus **Embroidery Canvas** Design Window.



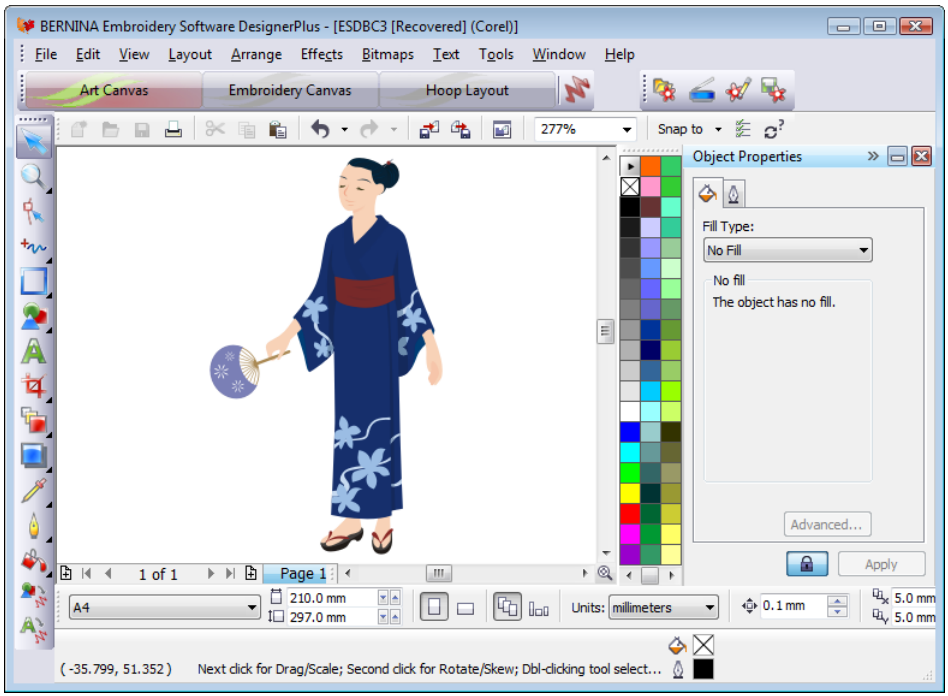
Art Canvas

Art Canvas

Load, edit and save graphics as a backdrops for embroidery digitizing. Includes entire suite of CorelDRAW® Essentials 4 drawing tools. In addition, provides capabilities to convert vectors and vector text directly to embroidery objects.

Below is a screen image of the **Art Canvas** workspace. This replaces the old 'Picture Mode' and includes the entire suite of CorelDRAW® drawing tools which offer many sophisticated

techniques for drafting outlines and shapes onscreen.



In addition to the CorelDRAW® Essentials 4 toolset, **Art Canvas** provides capabilities to convert vectors and vector text directly to embroidery objects. Vector graphics or text created or imported into the **Art Canvas** can be converted directly to embroidery designs. You can use **Art Canvas** to insert or paste third-party vector graphics such as clipart for use in embroidery designs. Alternatively, insert, paste or scan bitmap artwork for use as digitizing templates or 'backdrops'.

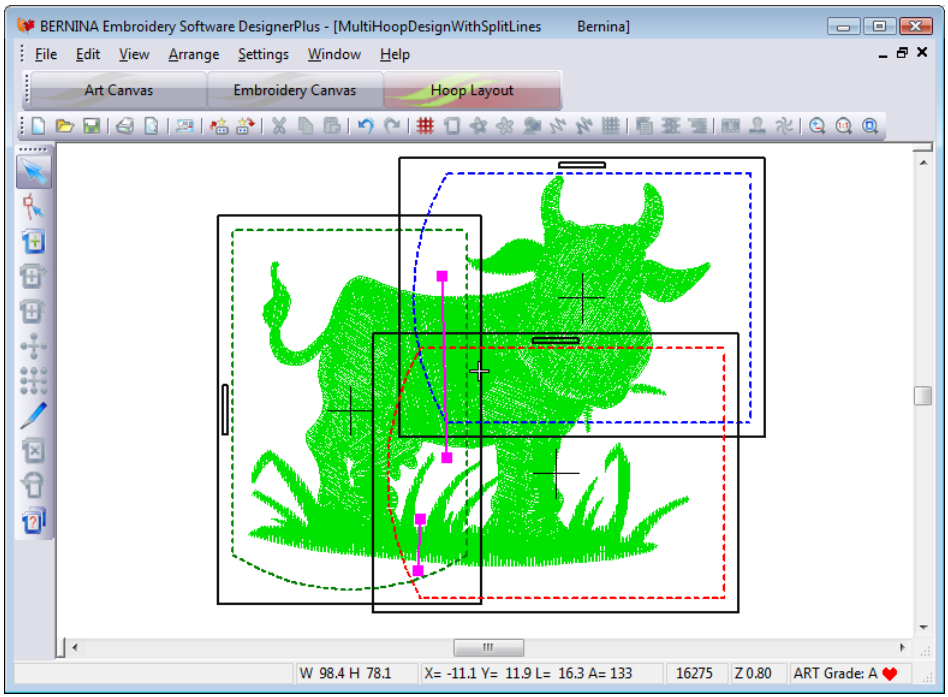
Note For a full description of the CorelDRAW® tools, refer to the electronic User Guide available via the Windows **Start > Programs** group. Alternatively, use the onscreen help available from the **Graphics** mode **Help** menu.

Hoop Layout

View and edit multi-hoopings. If embroidery is too large or contains multiple designs spaced around an article, split into multiple hoopings.

Below is a screen image of the **Hoop Layout** workspace, previously known as **Multi-Hooping View**. If your embroidery is too large or contains a number of designs spaced around an article, you can split it into multiple hoopings. **Hoop Layout** allows you to set up the position and sequence of each hoop. See

Hooping large designs in the Onscreen Manual for details.



Embroidery Canvas menu bar

The **Embroidery Canvas** menu bar contains the pulldown menus described below. Not all commands are relevant to all product levels. Some are also available as toolbar buttons.

Note Standard MS Windows® **Alt** key shortcuts apply. Use the **Alt** key with the letter underlined in the menu. To cancel an operation, press **Esc** twice.

File menu

New	Open new empty design.
Open	Open design.
Close	Close current Design Window.
Portfolio	Start BERNINA Portfolio and select design.
Cross Stitch	Start cross stitch program.
Quilter	Start Quilter program.
Insert Design	Insert existing design.
Save	Save current design.
Save As	Save current design with a different name, location or format.
Save Design As Image	Save design images in Stitch View or Artistic View. The resulting image is exactly as it appears in the Design Window.
Design Properties	Show information about a design such as size or number of stitches, and add comments about design for printing on worksheet.

Print	Print design.
Print Preview	Show design worksheet. Print worksheet from this window.
Card / Machine Read	Read (open) design from BERNINA Embroidery Software Design Card or BERNINA home embroidery machine.
Card / Machine Write	Write (save) design to BERNINA Embroidery Software Design Card or BERNINA home embroidery machine.
Write to Magic Box	Write (save) design to Design Card in Magic Box.
Read from Magic Box	Read (open) design from Design Card in Magic Box.
Recent File List	List most recently used files. Select to open a file.
Exit	Close all open designs and exit BERNINA Embroidery Software program.

Edit menu

Undo	Cancel last command.
Redo	Re-apply cancelled commands.
Cut	Deletes selection and places it on clipboard.
Copy	Copy selection to clipboard.
Paste	Paste contents of clipboard to Design Window.
Duplicate	Duplicate selection and place it on current selection.
Delete	Delete selection without placing it on clipboard.
Select All	Select all objects in design.
Deselect All	Deselect all selected objects in design.
Stitch Edit	Move insert point to selected point in design.
Smooth Curves	Apply curve 'smoothing' to embroidery objects. Selecting it opens the Smooth Curves dialog.
Lettering	Change lettering settings.
Elastic Lettering	Apply special effects to lettering objects to make them bulge or arch, stretch or compress.
Monogramming	Create personalized monograms with a selection of pre-defined monogramming styles, border shapes and ornaments.
Touch Up Picture	Open a third-party paint program to edit a selected bitmap graphic.
Crop Image	Crop a bitmap graphic for use with PhotoSnap.

View menu

By Color	Show only selected colors in design.
Needle Points	Show/hide needle points.
Picture	Show/hide background picture.
Overview Window	Show/hide design thumbnails.
Show 1:1	Show design at actual size.
Show All	Show whole design.
Center Current Stitch	Center currently selected stitch in Design Window. Shortcuts C and F6 also available.
Previous View	Return to previous view. Shortcuts V and F5 also available.
Zoom Out 2X	Display design at 50% of current view. Shortcuts Shift+Z and F10 also available.
Zoom In 2X	Display design at 200% of current view. Shortcut Z also available.
Zoom	Zoom in and out of the Design Window and zoom in on bounded areas to full window size. Shortcut F8 also available.

Zoom Factor	Display design to scale as percentage of actual size. Shortcuts F and F3 also available.
Redraw	Redraw design.
Slow Redraw	Redraw design slowly to show stitching sequence.
Hoop	Show/hide hoop and set hoop size and position.
Grid	Show/hide grid and set grid size and spacing.
Measure	Measure design size.

Arrange menu

Start and End	Set start and end points in design.
Stitch Sequence	Automatically arrange the stitch sequence to minimize hoopings, color changes and trims.
Sequence as Selected	Set stitching sequence for selected objects in order of selection.
Sequence to Start	Place selected object at start of stitching sequence.
Sequence to End	Place selected object at end of stitching sequence.
Sequence by Color	Set stitching sequence of objects in selected color order.
Color Film	Open Color Film dialog.
Mirror Horizontal	Mirror selected object/s horizontally about center.
Mirror Vertical	Mirror selected object/s vertically about center.
Group	Group selected objects into one object.
Ungroup	Separate grouped object into component objects.
Break Apart	Split monograms, appliqués, lettering, and Blackwork runs into component objects.
Lock / Unlock All	Lock and unlock objects to protect them during digitizing or editing. Shortcut keys K and Shift+K also available.
Remove Overlaps	Remove underlying layers of stitching in overlapping objects.
Add Holes	Remove stitching from shape (leaving hole).
Fill Holes	Fill holes in single objects.
Add Buttonhole	Add buttonhole to design.
Pattern Stamp	Place single patterns in the design.
Close Object	Close any open object with the option of using straight or curved points.

Settings menu

Thread Colors	Assign thread colors for use in design.
Fabric Settings	Adjust fabric types and settings.
Fabric Display	Select background fabrics and colors.
Object Properties	Adjust properties for selected shapes.
Options	Adjust settings for display window.
Security	Enter codes when upgrading or adding optional features.
Display Setup	Calibrate screen.
Scanner Setup	Set scanner options.
Create Pattern	Create and name patterns.
Create Border	Create and name borders.

Window menu

Cascade	Display any open windows in a 'cascaded' or stair-stepped fashion.
Tile Horizontally	Display any open windows in a horizontally 'tiled' (non-overlapping) fashion.
Tile Vertically	Display any open windows in a vertically 'tiled' (non-overlapping) fashion.
(Title of Open Window)	Choose from a list of open windows titles in the order in which they are stacked.

Help menu

Help Topics	List onscreen help topics.
Onscreen Manual	Onscreen documentation in Adobe Acrobat PDF format. Note: depending on your product level, documentation components may vary.
Quick Start Guide	
Release Notes	
About	Show BERNINA Embroidery Software version information.
Show Design Warning	Displays a warning when opening a design that should not be scaled.
BERNINA® International Home Page	Open BERNINA® International web site.
BERNINA® of America Home Page	Open BERNINA® of America web site.
Embroidery Online	Open Embroidery Online web site.
Access Code Order Form	Open Access Code online order form.
Purchase Upgrade on the Internet	Purchase software upgrades directly from the internet.
Install Upgrade	Downloads access codes to your dongle after email notification of successfully processed online upgrade purchase.

Viewing modes

There are three **View Mode** buttons in BERNINA Embroidery Software. The different modes display different toolbars.

Load, edit and save graphics as a backdrops for embroidery digitizing. Includes entire suite of CorelDRAW® Essentials 4 drawing tools. In addition, provides capabilities to convert vectors and vector text directly to embroidery objects.

Digitize and edit embroidery designs. Show embroidery shapes as well as graphics. View designs realistically in simulated 3D.

View and edit multi-hoopings. If embroidery is too large or contains multiple designs spaced around an article, split into multiple hoopings.

In Art Canvas mode, the View Mode toolbar includes the Show Embroidery button.

BERNINA Embroidery Software window toolbars

The Design Window contains the toolbars described below. Not all tools are relevant to all levels of product. Some are shortcuts to the pulldown menu commands.

General toolbar

This toolbar is available in **Embroidery Canvas** mode.

New	Same as File > New.
Open	Same as File > Open.
Save	Same as File > Save.
Print	Prints design using current print settings.
Print Preview	Same as File > Print Preview.
Write to Machine	Same as File > Card / Machine Write.
Read from Magic Box	Read designs from design cards using Magic Box.
Write to Magic Box	Save designs to design cards using Magic Box.
Cut	Same as Edit > Cut.
Copy	Same as Edit > Copy.
Paste	Same as Edit > Paste.
Undo	Same as Edit > Undo.
Redo	Same as Edit > Redo.
Show Grid	Same as View > Grid.
Show Hoop	Same as View > Hoop.
Show Pictures	Same as View > Picture.
Dim Artwork	Dim backdrops to show stitches more clearly when digitizing.
Show Vectors	Toggle on/off display of vector graphics.
Show Stitches	Toggle stitch view on/off.
Show Artistic View	Toggle artistic view on/off.
Show Appliqué Fabric	Toggle appliqué fabrics/colors on/off.
Object Properties	Same as Settings > Object Properties.
Auto Underlay	Add automatic underlay.
Textured Edge	Add textured edge to object.
Color Film	Same as Arrange > Color Film.
Carving Stamp	Define a pattern of needle penetrations using a 'carving stamp' as a template.
Morphing Effect	Create transformed object outlines and stitches.
Zoom Box	Same as View > Zoom Box.
Show 1:1	Same as View > Show 1:1.
Show All	Same as View > Show All.

Image toolbar

This toolbar is available in **Art Canvas** mode.

Load Picture	Load graphics – bitmap and vector – into BERNINA Embroidery Software for use as a digitizing backdrop or other.
Scan Picture	Scan images into BERNINA Embroidery Software.
Touch Picture	Touch up bitmap images in Corel PHOTO-PAINT® Essentials 4.
Save Picture	Save backdrop as graphics file – bitmap or vector.

Art toolbox

This toolbar is available in **Art Canvas** mode.

Convert Vectors to Embroidery	Convert selected vectors to fill or outline stitches.
Convert Text to Embroidery	Convert text objects to Satin embroidery lettering with turning stitching.

Note For a full description of the CorelDRAW® Essentials 4 tools, refer to the electronic User Guide available via the Windows **Start > Programs** group. Alternatively, use the onscreen help available from the **Graphics** mode **Help** menu.

Edit toolbar

This toolbar is available in **Embroidery Canvas** mode.

Select Object	Select embroidery object for sizing, moving, mirroring or rotating.
Polygon Select	Select irregular areas or shapes.
Reshape Object	Reshape selected embroidery and lettering objects.
Mirror Horizontal	Same as Arrange > Mirror Horizontal.
Mirror Vertical	Same as Arrange > Mirror Vertical.
Rotate 45° CCW / CW	Rotate selected objects in 45° increments. Click to rotate counter clockwise. Right-click to rotate clockwise.
Scale by 20% Down / Up	Scale selected object in 20% increments. Click to reduce object/s. Right-click to increase object/s.
Double Run	Repeat stitches in selected objects.
Remove Overlaps	Same as Arrange > Remove Overlaps.
Add Holes	Same as Arrange > Add Holes.
Fill Holes	Same as Arrange > Fill Holes.
Break Apart	Same as Arrange > Break Apart.
Color Blending	Digitize blended objects.
Image Preparation	Prepare bitmap artwork for automatic digitizing.
Convert Selected Embroidery to Art Vectors	Convert selected embroidery objects to vectors.

Digitize toolbar

This toolbar is available in **Embroidery Canvas** mode.

Auto Digitizer	Digitize prepared bitmap images automatically.
Magic Wand	Digitize single shape in design.
PhotoSnap	Turn grayscale or color photograph into embroidery.
Open Object	Draw and digitize open shapes.
Closed Object	Draw and digitize closed shapes.
Free Hand Embroidery - Open Object	Draw embroidery outlines directly onscreen and view a stitch simulation as you draw.
Free Hand Embroidery - Closed Object	Draw freehand filled embroidery objects onscreen.
Block Digitizing	Digitize columns with turning stitches.

Circle / Oval	Draw and digitize ovals or circles.
Rectangle	Draw and digitize rectangles or squares.
Lettering / Fill Values	Create lettering and change lettering properties.
Monogramming	Create personalized monograms using a selection of pre-defined styles, border shapes and ornaments.
Auto Appliqué	Digitize closed-object appliqué.
Partial Appliqué	Create appliqué objects with partial cover stitching.
Advanced Appliqué	Generate open-object appliqué from one or more source objects.
Outline Design	Stitch around groups of objects with Single, Triple or Satin Line.
Cross Stitch	Same as File > Cross Stitch.
Quilter	Same as File > Quilter.

Craft Stitch toolbar

This toolbar is available in **Embroidery Canvas** mode.

Blackwork Run	Automatically sequence selected embroidery objects.
Blackwork Border	Digitize blackstitch borders.
Blackwork Fill	Digitize fill blackwork designs.
Candlewicking Border	Digitize candlewick borders.
Candlewicking Fill	Digitize special candlewick effects.
Lacework	Digitize special lacey effects.
Stipple Run	Digitize special stippled effects.
Backstitch	Digitize backstitch borders.
Stemstitch	Digitize stemstitch borders.
Ripple	Create spiral stitching from the center of any filled object.

Stitch and Color Bar

This toolbar is available in **Embroidery Canvas** mode.

Outline	Select outline stitch for new and selected objects.
Single	Show outline stitch types for selection.
Fill	Select fill stitch for new and selected objects.
Stipple	Show fill stitch types for selection.
Stitch Angles / Values	Add stitch angles to closed objects with or without holes.
Remove Stitch Angles	Remove stitch angles from closed objects with turning stitches.
Star Fill	Generate radial turning stitching in several stitch types such as Satin and Tatami stitch.
Wave Fill	Contour fill stitches along a digitized guideline maintaining uniform density and needle penetration patterns.
Color list	List available thread colors.

Arrange toolbar

This toolbar is available in **Embroidery Canvas** mode.

Group	Same as Arrange > Group.
Ungroup	Same as Arrange > Ungroup.
Lock	Lock selected object/s into position for protection.
Unlock	Unlock selected locked object/s to remove protection.
Align Left (Vertical)	Left-align selected objects.
Align Centers (Vertical)	Vertically align centers of selected objects.
Align Right (Vertical)	Right-align selected objects.
Align Top (Horizontal)	Aligns top of selected objects.
Align Centers (Horizontal)	Horizontally align centers of selected objects.
Align Bottom (Horizontal)	Align bottoms of selected objects.
Align Centers	Align centers of selected objects to design center.
Mirror- Merge Horizontal	Mirror-merge horizontally.
Mirror- Merge Vertical	Mirror-merge vertically.
Mirror- Merge Horizontal & Vertical	Mirror-merge horizontally & vertically.
Wreath	Duplicate objects around a central point.
Kaleidoscope	Mirror objects around a central axis.

Color Film

This toolbar is available in **Embroidery Canvas** mode.

Show Individual Objects	View individual objects in order of stitching sequence. Drag and drop object icons to resequence.
Sequence As Selected	Resequence selected objects.
Sequence By Color	Resequence objects by color.
Sequence to Start	Place selected object at start of stitching sequence.
Sequence to End	Place selected object at end of stitching sequence.

Multi-Hooping toolbar

This toolbar is available in **Hoop Layout** mode.

Selection On	Select hoops in the Design Window.
Reshape Splitting Guide	Reshape split lines in the Design Window.
Add Hoop	Center a new hoop in the Design Window in an upright orientation.
Add Hoop Right	Place a new hoop directly to the right of a selected hoop with a 10 mm overlap between sewing fields.
Add Hoop Up	Place a new hoop directly above a selected hoop.
Add Four Adjacent Hoops	Automatically add four hoopings around a selected hoop's perimeter.
Add Eight Adjacent Hoops	Automatically add eight hoopings around a selected hoop's perimeter.

Splitting Guide	Digitize one or more split lines in a multi-hooped design prior to outputting to file, machine or memory card.
Delete Hoop	Remove selected hoops from the Design Window.
Rotate Hoop	Click left or right mouse buttons to rotate selected hoop 45° in either direction.
Calculate Hoopings	Evaluate hoopings that will result from current hoop layout.

Keyboard Shortcuts

You select commands in BERNINA Embroidery Software in the same way as other MS Windows® applications – from menus or toolbars. Keyboard shortcuts are also available for the most frequently used commands.

General functions

To	Press
Start new design	Ctrl+N
Open existing design	Ctrl+O
Save design	Ctrl+S
Print design	Ctrl+P
Undo command	Ctrl+Z
Redo command	Ctrl+Y
Cancel command	Esc
Exit the program	Alt+F4

Select objects

To	Press
Activate Select Object tool	O
Select all objects	Ctrl+A
Deselect all objects	Esc or X
Select object underneath	2+🖱
Select multiple objects	Ctrl+🖱
Select a range of objects	Shift+🖱
Select next object	Tab⇆
Select previous object	Shift+Tab⇆
Add next object to selection	Ctrl+Tab⇆
Add previous object to selection	Ctrl+Shift+Tab⇆

View designs

To	Press	Or
Zoom in 2x	Z	
Zoom out 2x	Shift+Z	F10
Zoom (box)	B then 🖱	F8
Zoom to 1:1 scale (100%)	1	
Zoom factor	F	F3
Show whole design	0 (zero)	F2
Show previous view	V	F5
Specify zoom factor	F	F3
Center current stitch	C	F6
Return to previous view	V	F5
Redraw the screen	R	F4
Show/hide picture	D	
Show/hide vectors	Shift+D	
Turn on/off Artistic View	T	
Show needle points	. (period or full stop)	
Show selected objects only	Shift+S	
Measure	M	
Show outlines (BERNINA Quilter only)	Shift+L	

View stitching sequence

To travel	Press	
	Keyb'rd	Keypad*
To the start of a design	Home	7
To the end of a design	End	1
To next color	PageDown	9
To previous color	Page Up	3
To next object	Ctrl+T	
To next selected object	Tab⇆	
To previous object	Shift+T	
To previous selected object	Shift+Tab⇆	
1 stitch forward	† →	6
1 stitch backward	† ←	4
10 stitches forward	† ↓	2
10 stitches backward	† ↑	8
100 stitches forward		+
100 stitches backward		-
1 segment forward	Ctrl+→	
1 segment backward	Ctrl+←	
Activate Slow Redraw	Shift+R	

* Num Lock OFF † Select Object tool OFF

Digitizing & lettering

To		Press
Activate Double Run		Shift + B
Delete the last input point	*	← Bksp
Finish digitizing an object	*	Enter ↵ or Spacebar
Turn underlay on/off		U
Display the lettering dialog		A

* BERNINA DesignerPlus only

Manipulate objects and stitches

To		Press or click
Nudge selected designs		↑ ↓ ← →
Move an object horizontally or vertically		+ Ctrl Drag the object
Maintain an object's proportions while resizing	†	Shift + Drag corner handle
Reshape selected object		H
Change reshape node type		+ Space Select reshape node and press spacebar
Group selected objects		Ctrl + G
Ungroup selected objects		Ctrl + U
Regroup ungrouped objects	*	Ctrl + R
Lock selected objects		K
Unlock selected objects		Shift + K
Bring object to front	*	Shift + Page Up
Bring object forward	*	Page Up
Send object to back	*	Shift + PageDown
Send object backward	*	PageDown
Activate Stitch edit		E

† Use Alt+Drag with BERNINA Quilter * BERNINA Quilter only

Cut & paste objects

To	Press
Cut object	Ctrl + X
Copy object	Ctrl + C
Paste object	Ctrl + V
Duplicate object	Ctrl + D
Clone object	+
Reinforce an outline	Ctrl + B
Delete selected object(s) or the last object	Delete

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